

**JANUARY 24, 1955**

**Why RR Outlook is Favorable . . . p. 29**

# RAILWAY AGE

**One of Five Simmons-Boardman Railway Publications**

MODERNIZE MEANS ECONOMIZE



**Milwaukee Completing Dieselization with 54 New GM Units**

Delivery of 12 General Motors GP9's for freight service and 42 switching units will complete the dieselization program of the Chicago, Milwaukee, St. Paul & Pacific early this year. Dieselization with GM locomotives produces maximum economies because, in addition to their well-known operating savings, standardization

of major components means lower-cost parts and maintenance. Many railroads are reaching complete dieselization more quickly by upgrading early Diesel units. With the increased horsepower of Electro-Motive's "C" engine, greater tractive effort and other improvements—fewer units are needed to do the job *at lower cost*.

**ELECTRO-MOTIVE DIVISION • GENERAL MOTORS**

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### Industry's Best Buy!

**T**HAT'S what we've been talking about this past year in *Railway Freight Traffic*, and other publications.

Each month we furnish thousands of reprints of these advertisements to the railroads for distribution to traffic personnel and shippers. We like to think that these little messages are small voices in the competitive jungle that is today's transportation picture—blazing a trail to the door of America's best transportation buy—rail-freight.

If these reprints can serve your railroad, too, just tell us how many you can use each month. We'll be glad to send them on to you—without charge, of course. We're all in this together.

**BUFFALO BRAKE BEAM CO.  
UNIT TRUCK CORPORATION**

A Half Century of Brake Beam Progress  
NEW YORK • BUFFALO • HAMILTON, ONT.

# Thanks...

## for your wonderful response

This message first appeared in *Railway Age* in December 1953. Since then, we have had a most gratifying response from both management and individual railroad employees, many of whom are giving freely of their own time to promote better community relations for our industry. We, here at BUFFALO, will continue to raise our small voice during the coming year.

**Mayari R** makes it lighter...stronger...longer lasting



ACF Industries, Inc., built 100 of these head-end cars, using Mayari R to lower deadweight 7000 lb per car.



Great Northern cut deadweight of these box cars from 49,000 lb to 41,000 lb by using Mayari R for sides, ends, doors and frames.

## They're trimming off deadweight with Mayari R

Railroads are calling on Mayari R high-strength, low-alloy steel to help trim deadweight down, by as much as 15 tons in passenger cars, and 6 tons in freight cars. With a yield-point far higher than plain carbon steel, a given gage of Mayari R can replace heavier-gage carbon steel in sides, ends, floor plates and under-frame members. Mayari R is being increasingly used in the structural members of locomotives, too.

Mayari R can be formed, cut and welded in the average railroad shop with the same equipment that is used for ordinary carbon steel. It has superior resistance to atmospheric corrosion, and holds paint

much better—as much as 80 pct longer, depending upon the type of paint selected.

In addition to cars and locomotives, Mayari R offers advantages in a wide variety of other railroad applications. Our new Catalog 353 illustrates many of these, and gives a great deal of technical information about this versatile steel. A call or letter to our nearest office will bring a copy to you promptly.

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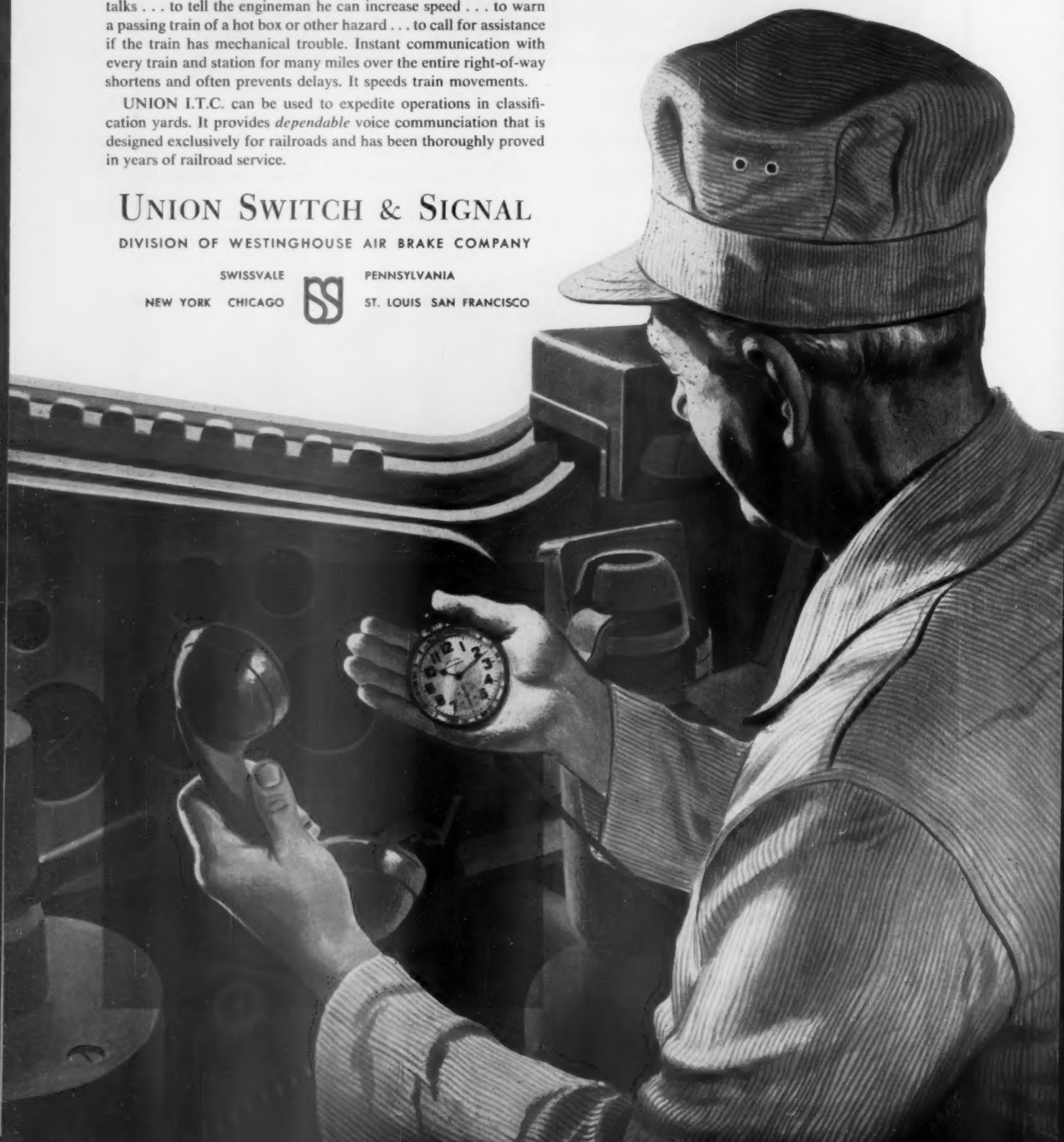
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January 24, 1955

Vol. 138, No. 4

## Week at a Glance

**Realization that rail commuter service can no longer be fully self-supporting may be one outcome of a \$500,000 study of New York-New Jersey transit problems, just authorized by the Port of New York Authority.** 9

**Yard operation may be headed for some fundamental changes, with television now operable on a large scale in the RF&P's Potomac yard, and complete "automation" in full effect in the EJ&E's big Kirk facility.** 10

**FORUM: The outlook for railroads is favorable—because even the best of up-to-date highways still cannot compete for volume movement of freight, over long distances, with up-to-date railroad service, where the latter is priced to reflect its true relative economy.** 29

**The Burlington crossed the river to build new and more efficient passenger and freight terminals to serve Quincy, Ill.** 30

**A new use for paint is being tried out, on the inside of gondola cars, with satisfactory results, by the C&IM.** 33

**Both ways on both tracks is the result of a 40-mile CTC installation on the Frisco. It has led to increased track capacity, elimination of train delays, reduced track maintenance expense.** 35

**Rate-making freedom in specific competitive situations is enjoyed by British Railways under the new Transport Act; in Canada proposals to loosen up regulations limiting "agreed charges" are under study. What do these developments portend?** 37

## BRIEFS

**Air lines by 1960 will be performing 45% of the inter-city passenger service (passenger-miles) performed by common carriers, according to Civil Aeronautics Admin-**



The U. S. highway is a mighty busy place these days. In fact, the I. C. C. estimates that in 1953, motorists traveled about 500 billion miles on it to get from one city to another.

Obviously, many motorists drove these hazardous, tiring miles only because they needed a car at their destination. But you can put many of these highway miles on your tracks . . . and increase your passenger revenue with the Hertz Rail-Auto Travel Plan. This increasingly popular mode of travel offers Americans the speed and luxury of modern trains . . . plus the convenience of a clean, new Hertz car at their destination.

Last year alone, people who rented Hertz cars at their destination actually traveled more than 136 million miles on the railroads first. Now, you, as railroad management, can put even more highway miles on tracks by telling more people about the plan. Here are some simple ways you can help:

**1 TRY** the Hertz Rail-Auto Travel Plan yourself. See how courteous, convenient and economical Hertz service really is.

**2 URGE** your ticket agents to ask passengers this simple question: "May I reserve a Hertz car for you at your destination?" The agent who makes the reservation gets 10% commission on the total rental charge.

**3 DISPLAY** specially designed and attractively printed Hertz signs on the grill of your ticket agents' windows. The signs read, "Reserve your Hertz car from your ticket agent," and are available, along with passenger Rail-Auto folders, at no charge to you.

**4 MENTION** the plan in your own advertising as an added inducement for persons to travel by rail. Use displays in your ticket offices. Advertise the plan in your timetable . . . on your billboards . . .

on highway over-passes. This way, you will be taking advantage of the \$1,000,000 Hertz spends every year in leading national magazines to advertise the Rail-Auto Travel Plan.

**And remember this:** Only Hertz, largest rent a car system in the world, can truly back up the Rail-Auto Travel Plan with more than 9,400 cars at nearly 800 offices in over 550 cities throughout the United States and foreign countries. And because of more than 30 years in the business, Hertz offers your passengers only the finest, most courteous service. With Hertz you're also assured of steady Rail-Auto Travel Plan business because more than 1,500,000 persons now hold Hertz Charge Cards and Courtesy Cards. Hertz also honors Rail Credit Cards. For more information about the Hertz Rail-Auto Travel Plan, and for reservation forms or other display material . . . write or phone.

## HERTZ Rent A Car SYSTEM

Dept. D15, 218 South Wabash Avenue  
Chicago 4, Illinois; phone: WEbster 9-5165



## Current Statistics

Operating revenues, eleven months	
1954	\$8,572,897,474
1953	9,848,917,002
Operating expenses, eleven months	
1954	\$6,755,791,805
1953	7,438,438,928
Taxes, eleven months	
1954	\$ 821,549,247
1953	1,162,856,463
Net railway operating income, eleven months	
1954	\$ 765,606,661
1953	1,031,517,291
Net income, estimated, eleven months	
1954	\$ 547,000,000
1953	799,000,000
Average price railroad stocks	
January 18, 1955	82.45
January 19, 1954	60.32
Average daily freight car surplus	
January 15, 1955	74,180
January 16, 1954	128,628
Average daily freight car shortage	
January 15, 1955	283
January 16, 1954	530
Freight cars on order	
January 1, 1955	15,317
January 1, 1954	29,950
Freight cars delivered	
December 1954	2,173
December 1953	4,456
Average number railroad employees	
Mid-December 1954	1,027,267
Mid-December 1953	1,155,071

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## Week at a glance CONTINUED

istrator F. B. Lee. The prediction was based on assumptions that air-coach rates "will be extended to medium and short-haul operations, and that intercity helicopter service will be inaugurated." The air lines' proportion of the 1953 business was 24%.

"Roadblocks against real railroad progress" is what present regulatory policies are called by Paul F. Royster, assistant to the under secretary of commerce for transportation. He thinks regulation must be made realistic before "we can tell railroad management that they should make proper use of their inherent advantages to control the traffic they are in fact best suited to handle."

"Orchids" have been awarded to the Pennsylvania by the Brotherhood of Railroad Trainmen for its decision to make its "piggyback" service available to common carrier truckers. But the brotherhood's official publication has harsh things to say about "regressive elements" which want "railroads . . . to convert much of their operation into truck fleets."

Government subsidy for railways — so they can pay higher wages and larger "fringe benefits"—and changes in the conduct of railway wage negotiations, will reportedly be sought by Canadian railway labor groups. Both demands are a result of labor's disappointment over results of the compulsory one-man arbitration award to "non-ops" in last year's fringe benefit dispute.

Stock option plans, the Central of Georgia has informed the ICC, constitute "a very desirable trend to encourage key personnel of the railroad industry to have ownership therein"—thus producing "a more aggressive and successful management."

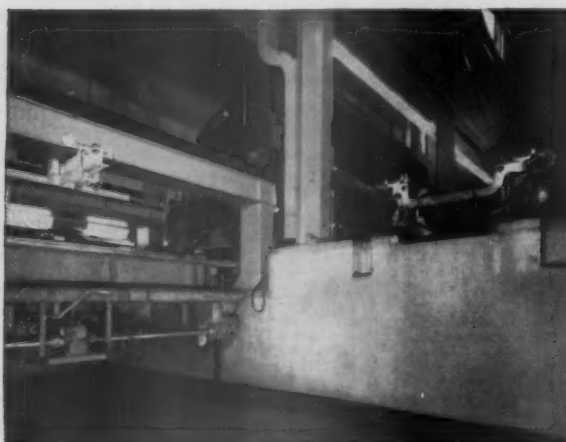
For suggesting the name "Trailer-Maid" for the Monon's forthcoming piggyback service, Walter Hecht, car inspector at South Hammond, Ind., was awarded a check for \$200 by President Warren Brown.



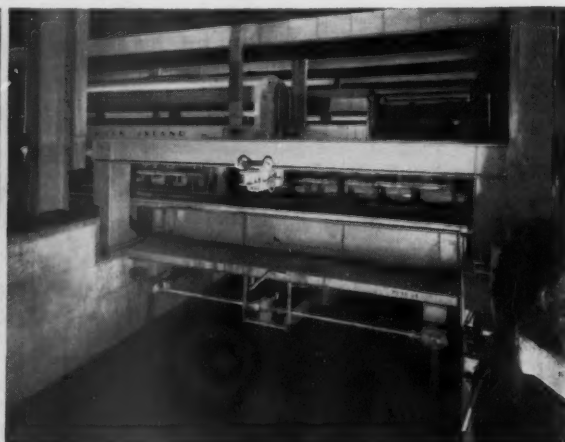
Serviced *right* and serviced *fast*! The Diesel you see above pulling out of the Rock Island's new repair shop in Chicago was serviced with the help of a Whiting Drop Table. Engineered to give efficient, trouble-free performance at low cost,

Whiting Drop Tables are used by most leading railroads. Write today for a Drop Table Bulletin that gives complete information.

**WHITING CORPORATION**  
15603 Lathrop Ave., Harvey, Illinois



Whiting Drop Table in the Rock Island's Chicago shop, in raised position with locomotive ready to be spotted; capacity, 90 tons.



Whiting "HL" type body support lets hostler spot precisely since, the supporting bracket is moveable.

## Traffic

# Court Reverses Ogden Ruling

Overthrows 1953 decision; orders ICC to hold another hearing—Supreme Court appeals may come first—"Benefits to Rio Grande will depend on service," says McCarthy

In a *per curiam* decision, a special U.S. court at Denver has overruled a January 1953 Interstate Commerce Commission order in the so-called Ogden gateway case.

The ICC's decision (*Railway Age*, February 2, 1953, page 12) required the Union Pacific to participate in joint through rates with the Denver & Rio Grande Western on a selected group of commodities moving over D&RGW-UP routes between Denver, Colorado Springs, Pueblo and points east thereof, on the one hand, and points in northern Utah, Idaho, Montana, Oregon and Washington, on the other.

In its January 13 decision, the court remanded the case to the commission for further hearings in accordance with the court's opinion that the Ogden gateway was open and had been open for many years. Those close to the case indicate, however, that an appeal to the U.S. Supreme Court will probably be filed before the ICC begins reconsideration.

At press time for this issue a UP spokesman said his company was "studying the decision," and that it was too early to indicate exactly how and when an appeal may be sought.

Judge Wilson McCarthy, president of the Rio Grande, declared: "Today's order confirms our belief that shippers should have freedom of choice in selecting routes. I am delighted with the decision and we will bend every effort to render the type of service which will attract substantial business to the Rio Grande."

**Background**—The Ogden gateway case dates back to August 1949, when the D&RGW filed complaint with the ICC against the UP and some other roads in an effort to secure establishment of competitive joint through rates for traffic between points on the UP in Northwestern states through Ogden, Utah, and via D&RGW to Denver, Colorado Springs, Pueblo and points east thereof. The Rio Grande complained that existing through rates via its own routes were actually combination rates, and were thus higher than those charged on similar traffic by the UP for movement entirely on its own lines west of the Colorado common points.

After prolonged hearings, the commissioner's chief examiner ruled in favor of the Rio Grande, but the commission, in January 1953, required the UP only to establish joint competitive rates westbound on monuments from Vermont and Georgia and eastbound on carloads of livestock, fresh fruit, vegetables, dried beans, frozen poultry, frozen foods, butter and eggs. The 10 members of the commission deciding the case were evenly divided on the question of whether through routes existed, as the D&RGW had claimed,

and therefore they did not grant the relief sought respecting all available traffic.

The decision proved unsatisfactory to both roads, and in June 1953 the UP filed suit in the U.S. District Court at Omaha, seeking annulment of the commission's order. The Rio Grande joined in this case to seek elimination of restrictions imposed by the commission. In October 1954 this court decided that the commission's order should be set aside except with respect to traffic which required stop-in-transit privileges, for which establishment of through routes and joint rates between the two roads was, in the court's opinion, required. The court held that establishment of through routes on all other traffic would result in short-hauling the UP. Although both roads filed petitions for rehearing this case, the petitions were denied.

Shortly after the Omaha suit was filed, the D&RGW filed suit in the U.S. District Court in Denver to enjoin that portion of the commission's



AS PART OF THEIR TRAINING, junior engineers from the Southern have been attending special instruction classes in various phases of railroad passenger car power and air conditioning equipment at the Hamden, Conn., plant of the Safety Car Heating & Lighting Co. The classes will be supplemented by special application and maintenance studies in railroad facilities at Spartanburg, S. C. Here J. J.

Kennedy, Safety vice-president (sales), points out features of his company's new 16-ton evaporative condenser to a group which includes, left to right, standing: W. P. Shotwell, of the Safety company, O. C. McKinnie, J. L. Moran, J. P. Satterfield, Mr. Kennedy, C. R. Smith, D. M. Barkdale, J. H. Coleman, and R. T. Binner; and, kneeling: W. H. Fletcher and J. B. Yonge.

order which failed to require establishment of joint rates on all traffic moving via the Ogden gateway. The UP intervened and sought dismissal, pre-

senting the same contentions as in the Nebraska case.

Traffic concerned is estimated to total \$50 million annually.

## Law & Regulation

### Clarke Cites "New Look" at ICC

Sees commission getting away from "inflexible precedent" as it bases thinking on "realistic appraisals of current conditions in the transport field"

"The stagnation of a changeless policy has no place in modern regulation," Interstate Commerce Commissioner Owen Clarke said recently in discussing the "new look" at the commission.

"The commission," Mr. Clarke also said, "is endeavoring to substitute flexible logic for inflexible precedent. The result, it seems to me, is a more realistic balance between adherence to the past, adjustment to the present, and provision for the future."

"Only by realistic appraisals of current conditions in the transport field and by adjusting our thinking accordingly can we preserve the real benefits of the enterprise and initiative which competition most certainly stimulates. This is the proper role of effective regulation. It is in this spirit that the commission is approaching its many responsibilities today."

Mr. Clarke made these statements in a January 13 address at Cleveland, before the Cleveland Chapter of the National Defense Transportation Association. To emphasize his point, he cited the commission's recent decision approving car-spotting rules that were agreed upon by a committee representing Official-territory railroads and the National Industrial Traffic League (*Railway Age*, January 17, page 6).

**Reversal**—He called the decision "a substantial reversal of a long line" of previous commission determinations with respect to plant switching. He said it indicated that a majority of the commission now feels that, in applying principles set out in the Ex Parte 104 case, the commission "has been unduly restrictive" in that "the practical necessities of railroad switching have not been fully recognized, and too little emphasis has been given to the right

and need of shippers to receive a complete transportation service."

The commission's "new look" was linked by Mr. Clarke to the formation of the Council of Eastern Rail and Truck Common Carriers (*Railway Age*, January 17, page 9). "With this constructive approach by industry and with the new attitude that prevails within the ICC," he said, "I am confident that our national transportation system is not in danger and that it will continue to meet the needs of a prosperous nation in peace or war."

As to calls for legislation to make regulation less restrictive, Mr. Clarke said he was ready to agree "that there is a need for Congressional action clearly defining the set of economic principles the commission should employ in regulating competitive forms of transport." At the same time, however, he emphasized his belief that the "attitude of the regulator is the most important factor."

**Defense Transport Goals**—Discussing his work as defense transport administrator, Mr. Clarke said DTA has recommended that the Office of Defense Mobilization extend, "at least" until the end of this year, the period within which defense transport goals be achieved to qualify new facilities and equipment for accelerated amortization. The present expiration date is June 30.

"It now appears that most of the transportation goals will not be achieved by the expiration date," Mr. Clarke said. He pointed out that "falling revenues and idle capacity" have rendered the fast write-off program "unattractive as a spur to new construction."

"However, with all signs pointing toward an increase in traffic," the commissioner added, "we believe management will once again enthusiastically respond to the tax amortization incentives as their revenues continue to improve."

### Many Interests Join to Urge Repeal of Transport Taxes

The National Conference for Repeal of Taxes on Transportation has called on Congress to repeal the 10% excise tax on passenger fares, the 3% tax on freight charges, and taxes levied on movement of coal and of products moved by pipe line.

At a January 18 meeting of the conference in Washington, plans were made for a concerted effort to bring about elimination of those taxes, which, according to the conference, are "imposed upon one of life's basic necessities—transportation."

Presiding at the meeting was Donald G. Ward, chairman of the conference and director of transportation of Olin Mathieson Chemical Corporation. Mr. Ward declared that these taxes "not only discriminate against users of common carriers but also discourage the use of such services," and called attention to the widely diversified support of the movement for repeal by organi-



"SUPERIOR TRANSPORTATION SERVICE" and longer life than is attained by conventional equipment are anticipated by the Lackawanna from these new 50-ton box cars, which include such special features as copper-bearing steel, high-capacity draft gear, high-speed trucks, plywood lining with heavy steel backing, extra-thick

floors, heavy steel floor plates in 8-ft doorways, and built-in lading strap anchors. The cars illustrated are the first to be completed of 500 being built by the Magor Car Corporation at Clifton, N.J.; another 500, including the same special features, are being built by ACF Industries, Inc., at Berwick, Pa.

zations representing shippers, travel groups, transportation industries and labor.

Besides Mr. Ward, the executive committee of the conference consists of:

W. F. McGrath, American Society of Travel Agents; J. D. Durand, Air Transport Association of America; W. W. Belson, American Trucking Associations; J. L. Bossemeyer, National Association of Travel Organizations; R. V. Craig, Allied Mills; F. F. Estes, National Coal Association; Leif Gilstad, Transportation Association of America; F. T. Greene, American Merchant Marine Institute; R. S. Henry, Association of American Railroads; G. C. Locke, Committee for Pipe Line Companies; Giles Morrow, Freight Forwarders Institute; W. H. Ott, Jr., National Industrial Traffic League; M. O. Ryan, American Hotel Association; J. G. Scott, National Association of Motor Bus Operators; G. H. Shafer, Weyerhaeuser Sales Company, and C. C. Thompson, American Waterways Operators.

## President Would Extend User Charge Principle

President Eisenhower said in his annual budget message that "the user charge principle should be further extended."

The statement came after the President had referred to his recommendations that "we start a 10-year program to modernize the interstate highway system," and that "we step up aeronautical research, expand airway navigation facilities, and help industry build more ships."

**Beneficiaries Should Pay** — "I firmly believe," the President added, "that as large a proportion as possible of the expenditures of the government should be borne by those directly benefiting therefrom."

Later on in the message, the President had a table labeled "expenditures for civil benefits." There he included most of the postal deficit among "benefits to private business," because the Post Office Department's analysis shows that the deficit arises principally from inadequate second and third-class mail rates." In an earlier message to Congress, the President recommended that the Post Office Department be put on a self-sustaining basis.

**Money for ICC**—The budget message was submitted to Congress on January 17. It included the budget which proposed a fiscal 1956 appropriation of \$11,975,000 for the Interstate Commerce Commission. That would be an increase of some \$300,000 above the commission's estimated expenditures for the current fiscal year. Moreover, the fiscal 1956 proposal is for a lump sum appropriation, with no specified amounts for railroad safety and locomotive inspection work.

The budget message's principal discussion of transportation came in a section devoted to "commerce and manpower." There the President said the basic principle underlying his recommendations for transport and other business programs "is that the national interest is best served by privately owned and operated industry, which is assisted by a minimum of federal funds and federal basic facilities operated at the lowest feasible cost and financed, where possible, by charges levied on the users of the services."



**TOO BIG** to go through even the Boston & Maine's double-track Hoosac tunnel—or to pass other cars on some double-track lines — this distillation tank was recently moved from Boston to Port Arthur, Tex., over a specially planned tunnel-free route. The unusual shipment was transferred from the

B&M to the Rutland at Bellows Falls, Vt., and from there moved to Texas via Rutland, Binghamton, N.Y., Joliet, Ill., and Kansas City. The 55,000-gal tank, 29 ft long and 16 1/3 ft in diameter, was built by the O. G. Kelley Company for the Gulf Oil Corporation.

**Would Cut Air Subsidies**—The President found that several steps had been taken to implement this policy, including steps "to promote an economically sound system of air transportation with reduced reliance on federal subsidies." He also said he had requested preparation of a plan to reduce the federal government's air-safety activities "without affecting the present high level of safety."

As to rivers and harbors work, the President said 14 new navigation projects would be recommended in the 1956 fiscal year. He referred to the proposed dredging of the Delaware river between Philadelphia and Trenton, but said that would be recommended "only on the basis that provision be made for adequate cost-sharing in some form."

## Operations

### Faster Westward Freights

The Milwaukee has begun operation under new westward freight schedules which reduce running time about 24 hours between St. Paul-Minneapolis and Seattle and Tacoma.

Train No. 83, providing connection from Chicago to the Twin Cities, is now scheduled for 13½ hours en route to St. Paul. Train 263 leaves St. Paul at 7:15 a.m. and arrives Seattle at 9:30 p.m. the second day. Similarly, scheduled service between Chicago (Bensenville yard) and Council Bluffs

has been reduced to 14 hours en route, with 6:30 a.m. arrival.

The faster schedules were placed in effect January 11. Pacific Northwest services of the Great Northern and Northern Pacific were similarly speeded January 12 (*Railway Age*, January 3, page 7).

### PRR Plans Increase In N. Y. Suburban Service

The Pennsylvania will request authority from the New Jersey Board of Public Utility Commissioners to increase suburban service on its main line between New York and stations as far west as New Brunswick, N.J. To achieve the increase, the road would effect some reductions in what it described as "little-used" suburban service between New Brunswick and Trenton, as well as some withdrawals at Jersey City.

T.J. Costello, manager of the road's suburban service, said it is planned to inaugurate the program early in March. The new schedule, he added, would effect a net reduction of eight services at Trenton and seven at Jersey City, but would provide 37 additional daily services at Rahway; 36 at Linden; 34 at Elizabeth; 15 at Metuchen; 14 at New Brunswick; nine at Iselin; five at North Rahway; three at North Elizabeth; and one at Colonia.

Only purely local services would be withdrawn. Fast through service between Trenton and New York and Newark would be increased by stopping two additional express trains at Trenton. Forty-one suburban-service trains

would be added to those now arriving or originating at Pennsylvania Station, New York. Travelers to and from Jersey City could connect with those trains at Newark by using the Hudson & Manhattan.

The program calls for continued operation of 18 suburban services at Jersey City, and 89 daily express and local services between Trenton and the PRR's eastern terminals (New York, Newark and Jersey City), not including through trains from the South and west which stop at Trenton, Mr. Costello said.

Bulk of the increased New York-New Brunswick service would be offered between 10 a.m. and 4 p.m. Several trains are to be added to evening schedules to accommodate theatregoers. Only minor revisions are planned in service now operated during regular commuter periods. No changes are contemplated in weekend and holiday service.

### C&O Announces New LCL Substituted Truck Service

The Chesapeake & Ohio on January 11 began substituted truck service for its lcl freight between Huntington, W. Va., and a point just east of Montgomery on the main line. Many branch lines between those points also will be serviced. Four tractors and seven trailers are used in the service.

### Port Authority to Study NJ-NY Commuter Service

The Port of New York Authority will spend \$500,000 for a study of commuter service between Manhattan and New Jersey. The study—to be made for the Metropolitan Rapid Transit Commission, a bi-state agency set up to study regional rapid transit outside the jurisdiction of the New York City Transit Authority—will be limited to New York-New Jersey commuter service.

Consultants who will be asked to make the study are to decide what would be the most feasible system of

integrated rapid transit for the New York-New Jersey region; what type of agency should operate the system; and how the system's possible deficits should be met. The study, to blueprint a program for the next 20 years, is expected to take 18 months to complete.

Meanwhile, it has been announced that Joseph L. White, transportation consultant, has been named research assistant to the executive director of the MRT commission, with headquarters at 15 Broad street, New York.

## New Facilities

### EJ&E First with Complete Yard Automation

First installed in the summer of 1953 on 16 tracks of Kirk yard, at Gary, Ind., on the Elgin, Joliet & Eastern, General Railway Signal Company yard automation is now in service on all 58 tracks, thus making Kirk yard the first in America to be equipped completely for automatic operation. (*Railway Age*, October 19, 1953, page 78).

The system embodies several important advances in retarder control. Chief of these is an electronic method of determining rolling resistance for each cut of cars, with automatic modification of car speeds to compensate for variations in rollability. This system includes radar speed measurement, automatic weight detection, and compensation for track resistances of different routes. Electronic "thinking" circuits integrate all factors to establish retarder control.

During the many months the system has been in operation in part of Kirk yard, it has demonstrated its effectiveness in protecting cars and lading, and expediting car classification. In addition to the installation now in operation at Kirk, GRS yard automation also is being installed in yards on the Southern Pacific at Houston, Tex., on the Southern at Chattanooga,

Tenn., on the Northern Pacific at Pasco, Wash., and in three coal storage yards at steam generating plants built by the Tennessee Valley Authority.

### TV in Potomac Yard

What is described as "a revolutionary application of television to railroad operations" was introduced January 20 at Potomac yard, Alexandria, Va.

This installation, said to be the first permanent one of its kind in the United States, permits instant identification of freight cars entering the yard from the South. It both speeds up and cuts the cost of handling cars before they are switched to outbound tracks to be made up into new trains.

#### The system works as follows:

At the entrance to the northbound receiving tracks, a shed has been constructed through which each arriving train from the South must pass. This shed, 40 ft long, houses two television cameras. Floodlights make it possible to obtain a clear TV picture around the clock and under all kinds of lighting and weather conditions.

As a freight train proceeds through the shed and in front of the TV cameras at a speed of about 10 mph, the number and initials of each passing car in the train are flashed on a TV screen in the car record office, two miles distant. Talking into a microphone, a clerk records on tape from the screen the numbers and initials of cars in the moving train, thus making that information available to hump and car record offices before trains even come to a stop in the receiving yard. From this information, waybills can be processed with greatly increased speed, and the cars then switched to any one of 49 northbound classification tracks for making up into other trains.

The television system, which replaces identification of cars by men on the ground, is the result of nearly two years of research and experimental testing.

The installation cost about \$30,000, according to C. E. McCarty, yard manager. It is estimated that an annual net saving of nearly 40% will be realized in operating costs. Plans for a similar TV installation on southbound receiving tracks at the other end of the yard are now being considered.

Potomac yard, covering 520 acres, is owned by the Richmond, Fredericksburg & Potomac, and used by that line and the Baltimore & Ohio, the Chesapeake & Ohio, the Pennsylvania and the Southern.

**Canadian National.**—The 43-mile branch line from Terrace, B.C., to a giant aluminum project at Kitimat, has been completed. Work trains were operated over the new \$10,000,000 line in December and it is expected that regular freight and passengers will be handled shortly. The project was begun late in 1952.



**ORDER** for 300-high-speed 50-ton refrigerator cars, to cost more than \$6 million, to be built for the Railway Express Agency by General American Transportation Corporation, was signed by REA President A. L. Hammell (seated, right). Beside him is GATC Chairman Lester N. Selig; standing are C. L. Philipp, vice-president of the builder, and H. P. Dunlap, vice-president of REA's Western departments.

## Figures of the Week

### Freight Car Loadings

Loadings of revenue freight in the week ended January 15 totaled 644,940 cars, the Association of American Railroads announced on January 20. This was an increase of 42,737 cars, or 7.1% compared with the previous week; an increase of 25,069 cars, or 4%, compared with the corresponding week last year; and a decrease of 60,077 cars, or 8.5%, compared with the equivalent 1953 week.

Loadings of revenue freight for the week ended January 8 totaled 602,203 cars; the summary, compiled by the Car Service Division, AAR follows:

REVENUE FREIGHT CAR LOADINGS			
For the week ended Saturday, January 8			
District	1955	1954	1953
Eastern	102,267	107,318	118,521
Allegheny	110,938	118,479	140,639
Pocahontas	49,443	46,157	51,822
Southern	116,512	120,512	127,257
Northwestern	68,714	69,705	74,958
Central Western	103,485	106,004	114,975
Southwestern	50,844	56,054	59,938
Total Western Districts	223,043	231,763	249,871
Total All Roads	602,203	624,229	688,110
Commodities:			
Grain and grain products	43,765	43,794	45,874
Livestock	8,522	8,030	9,570
Coal	119,424	117,935	136,544
Coke	9,743	10,127	14,577
Forest products	39,176	40,957	41,777
Ore	16,276	18,716	19,668
Merchandise l.c.l.	55,028	56,949	63,627
Miscellaneous	309,319	327,731	356,563
January 8	602,203	624,229	688,110
January 1	529,452	477,805	562,957
Cumulative total, 2 weeks	1,131,655	1,102,034	1,251,067

**In Canada.**—Carloading for the ten-day period ended December 31 totaled 84,890 cars, compared with 68,513 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
December 31, 1954	84,890	36,938
December 31, 1953	83,334	32,458
Cumulative Totals:		
December 31, 1954	3,691,923	1,424,445
December 31, 1953	3,992,332	1,613,421

## People in the News

### Hutchinson Named to ICC; Com. Tuggle Reappointed

Everett Hutchinson, a Texas Democrat, has been nominated by President Eisenhower for membership on the Interstate Commerce Commission. The nomination went to the Senate January 14, when the President also submitted his reappointment of Commissioner Kenneth H. Tuggle for a new 7-year term expiring December 31, 1961.

Mr. Hutchinson's appointment was for the remainder of the term of for-

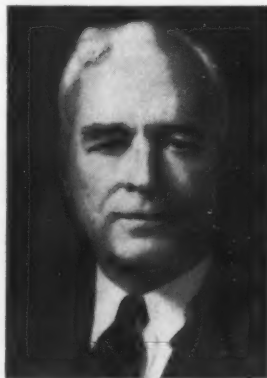
mer Commissioner Charles D. Mahaffie, which expires December 31, 1958. Mr. Mahaffie became 70 years of age December 5, 1954, and the White House on January 3, announced his compulsory retirement as of the end of 1954.

**Mahaffie Won't Sue.**—Mr. Mahaffie told *Railway Age* last week that he does not expect to contest the White House's position that the retirement-at-70 rule applied to him. His decision will leave unsettled the legal question which had been raised on the basis of contentions that his appointment to a specific term which ran through his 70th birthday carried exemption from the retirement rule until the end of the term involved (*Railway Age*, January 10, 1955).

The commission announced January 17 that Mr. Mahaffie had been admitted to practice before it. His retirement ended a 38-year career of continuous service with the federal government.

Mr. Mahaffie was born December 5, 1884, at Olathe, Kan., and was graduated in 1905 from Kingfisher College with a B.A. degree. As a Rhodes scholar from Oklahoma, he received a B.C.L. degree from Oxford University in 1907. He was an instructor at Princeton University from 1909 until 1911, and for the next five years was in private law practice at Portland, Ore.

Mr. Mahaffie's government career began in 1916 when he became solicitor for the Department of the Interior. Five years later, he joined the legal staff of the U. S. Railroad Adminis-



Charles D. Mahaffie

tration, and, in 1922, became director of the ICC's Bureau of Finance. He remained in that position until his appointment to the commission in 1930. His service as a commissioner was continuous from that time, and he was the commission's chairman in 1936 and 1949. Since June 1949, he has been a member of the United States National Commission in the Pan American Railway Congress.

**Mr. Hutchinson** was born in Hempstead, Tex., January 2, 1915, and educated at the University of Texas, where he was awarded B.B.A. and

LL.D. degrees. His career includes two years of service in the Texas legislature; 3½ years in the Navy during World War II, when he advanced to the rank of lieutenant commander; and three years as attorney for the Texas Railroad Association.

Mr. Hutchinson has also served for three years as assistant attorney general of Texas. In that position, he was in charge of transportation, natural gas, and petroleum matters. Since 1951, he has been practicing law at Austin, Tex.

### President Would Keep Hall As Loco. Inspection Chief

President Eisenhower has submitted to the Senate his nomination of John A. Hall for the position of director of locomotive inspection, Interstate Commerce Commission.

Mr. Hall has been serving in the position since last October, pursuant to an interim appointment which the President gave him while Congress was not in session (*Railway Age*, October 18, 1954, page 15).

## Organizations

### "Adapt or Die"

Demanding repeal of the transportation tax on passengers and freight, the Midwest Shippers Advisory Board, by resolution at its January 13 meeting in Chicago attempted to start a "chain reaction." It will ask the other 12 shippers boards to join in this campaign because the freight tax is "discriminatory" against shippers who use public carriage, promoting growth of private transportation at the expense of common carriers, and the passenger tax "tends to discourage travel by public carriers."

**"Adapt or die,"** railroaders and shippers were advised by the principal luncheon speaker, Earl L. Butz, assistant secretary, U. S. Department of Agriculture. "We should each ask ourselves," he said, "Am I and the industry I represent changing, or do we still cling to dead values that no longer apply?" His plea for progress was coupled with an appeal for more free enterprise and competition—less dependence on government aid and price supports. "We are counting on men like you to keep the government's role [in our economy] subordinate."

Continuing a board tradition of vigorous debate, shippers raised sharp questions about alleged failures of rail service. They complained that:

- Bad order ratio of 6.9% is too high, and repair forces should be increased.
- Sixty-foot at cars for agricultural implements are in short supply, while railroads are buying and building 75-ft flat cars "for their own use" in piggyback.
- Lcl transfers at Chicago are slow, and

merchandise is sometimes loaded into a wrong car.

- Many cars supplied to shippers are unfit because of bulging ends.
- Cars set out bad order are not being reported to shipper or receiver unless they ask for tracing.

J. J. Mahoney, general superintendent transportation, Santa Fe, and chairman of the Railroad Contact Committee, answered that the figure for bad order cars is high because of a surplus of gondola and hopper cars, which makes it possible to defer repairs on those while concentrating on upgrading box cars. He reported that "half a dozen or more" railroads are now using the cocooning process for repairing rough car walls.

**New Officers** elected by the board are Perry G. Jefferson, general traffic manager, Fairbanks Morse & Co., Chicago, general chairman; A. C. Shaw, traffic manager, Curtis Companies, Clinton, Iowa, alternate general chairman; and Frank J. Wade, general traffic manager, Corn Products Refining Company, Chicago, general secretary.

### "Government Rates" Topic at New Orleans

Whether the federal government's present authority to negotiate cut-rate transportation with shippers is fair to the general public, will be the major topic at a Southeastern Area Transportation Conference in New Orleans, February 3, at the Hotel Jung. The conference is sponsored by the Chamber of Commerce of the United States in cooperation with the New Orleans Area Chamber, the Alabama and Florida State Chambers, and the Mississippi Economic Council.

The question of cut-rate transporta-

tion to government will be debated by a panel moderated by Warner B. Shepherd, general traffic manager, Aluminum Company of America. Panel members will be: James F. Pinkney, general counsel, American Trucking Associations; Donald W. Markham, assistant general counsel, Air Transport Association of America; Chester C. Thompson, president, American Waterways Operators; W. M. Maloney, general attorney, Association of American Railroads; L. A. Parish, vice-president, Pan Atlantic Steamship Corporation; Gordon C. Locke, executive secretary, Committee for Pipeline Companies, and Jack Garrett Scott, general counsel, National Association of Motor Bus Operators.

Principal speakers and their topics will be: Robert J. Bayer, editor, *Traffic World*, "The Washington Scene"; S. B. Turman, president, Lykes Bros. Steamship Company, "Our Federal Maritime Policy"; G. C. Taylor, president, Mississippi Valley Barge Line Company, "The Role of the Common Carrier Barge Line"; and J. H. Carmichael, president, Capital Airlines, and associate chairman, Transportation and Communication Committee, U.S.C. of C., "Transportation—One Industry."

The conference is one of a series arranged by the national chamber to familiarize businessmen with national transportation affairs.

The **Pittsburgh Chapter** of the **Railway Business Women's Association**, the forty-fourth to be organized, was granted a charter January 15. Mary B. O'Donnell, of the Pennsylvania, is president; Alicia M. Kramer, Bessemer & Lake Erie, vice-president; Erma H. Culp, Union, corresponding secretary; Viola E. Murphy, Pittsburgh, Chartiers & Youghio-

gheny, recording secretary; and Ethel K. Donaldson, Pittsburgh & Lake Erie, treasurer.

The 98th regular meeting of the **Southwest Shippers Advisory Board** will be held in Corpus Christi, Tex., January 25-27. W. G. Vollmer, president of the Texas & Pacific, will speak at a luncheon on the 27th; his subject, "Our National Transportation Policy." Other speakers during the meeting will include Dr. H. K. Snell, professor of transportation, University of Texas, on "Business Outlook for 1955"; Douglas Orme, vice-president—traffic, Cosden Petroleum Corporation, on loss and damage prevention activities; and J. J. Kelley, manager, Military Transportation Section, Car Service Division, Association of American Railroads, on general transportation conditions.

The 32nd annual meeting of the **Northwest Shippers Advisory Board** will be held at the Hotel Lowry, St. Paul, January 25-26. Speaker at the luncheon session on the 26th will be Lloyd J. Severson, vice-president in charge of mineral development, Oliver Iron Mining Division, United States Steel Corporation. R. E. Clark, manager, Closed Car Section, Car Service Division, Association of American Railroads, will present a report on national transportation conditions at the business session on the same day.

"Railway Passenger Cars Today" will be the subject of an address by J. G. Mitchell, chief engineer and production manager, Car division, Canadian Car & Foundry Co., at a meeting of the **Railroad Enthusiasts, New York Division**, at 8 p.m., January 28, in the YMCA Auditorium, Pennsylvania Station.



**DOZENS OF DOMES**—more or less—are visible in this view of the St. Charles, Mo., plant of ACF Industries, Inc., where the remainder of the Union Pacific's order for 35 dome coaches, observation cars and diners

is being rushed to completion in time for the summer travel season. Ten dome coaches will be in transcontinental service by the end of this month, and delivery of the other cars is scheduled through May.

## Equipment & Supplies

### MP Would Spend \$13,384,650 in '55

The Missouri Pacific has requested Federal Court authority to spend \$4,758,050 for 700 new freight cars and \$8,626,600 for property improvements. The cars, to be built in company shops, would include 50 flat cars and 650 box cars and would be financed by equipment trust certificates.

#### FREIGHT CARS

### 2,173 New Freight Cars Delivered in December

New freight cars delivered in December for domestic use totaled 2,173, compared with 1,302 in November and 4,456 in December 1953, the American  
(Continued on page 16)



Down time is no joke. The best way to avoid it is to insist on *genuine* CAT\* parts every time. That's the only way to be sure of getting parts that are made to the latest design, precisely manufactured of the right materials, rigidly inspected and tested.

**Take these two fuel injection pumps, for example.**

They look alike. The genuine part is Caterpillar-built: plunger and barrels of finest ball-bearing type steels, the clearance between them held to 25-millionths of an inch, the finished pump pre-set and tested at the

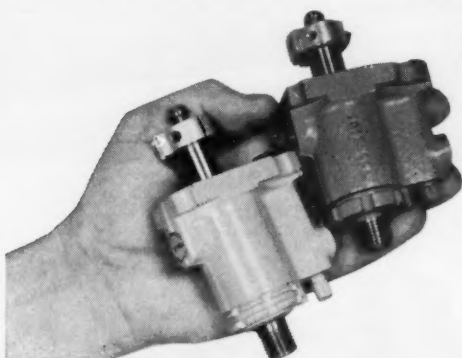
factory, calibrated for use interchangeably with different cylinders in different engines. The substitute part: who can be sure?

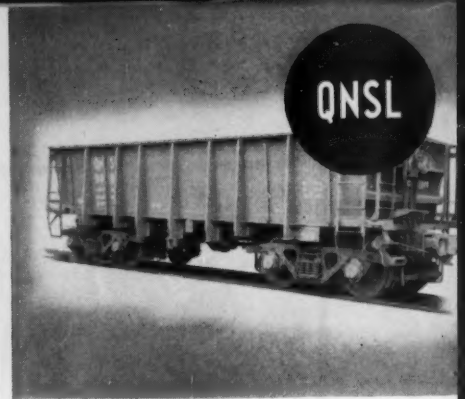
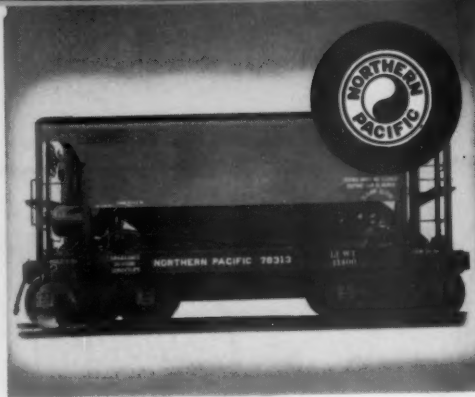
The difference on the job: with all-Caterpillar fuel injection equipment you get simplicity and reliability, the ability to burn low-cost non-premium fuels, interchangeability of parts, easy maintenance, long life. With substitute parts: who can be sure? **Better get genuine Caterpillar parts every time.**

Caterpillar Tractor Co., Peoria, Illinois, U. S. A.

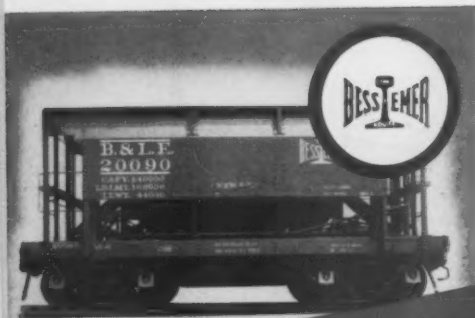
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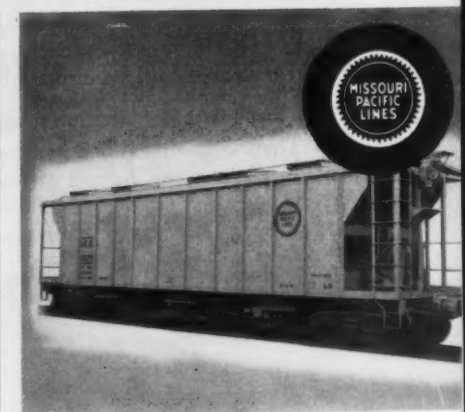
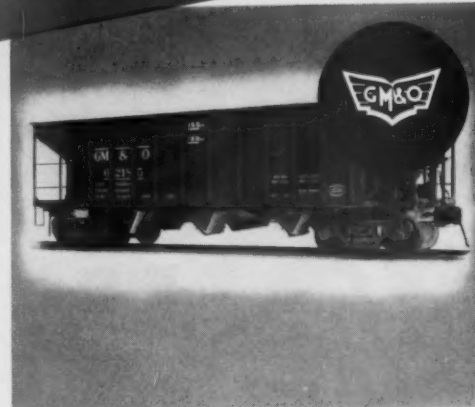


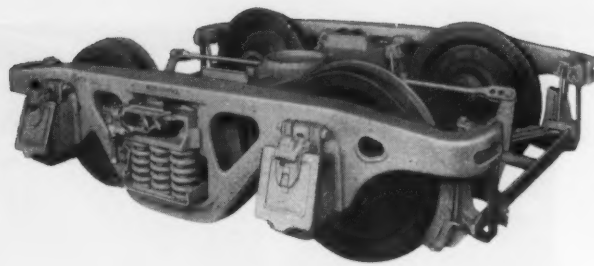


# For New Ore



**AND NOW...** { RESERVE MINING COMPANY CHOOSES A-3's FOR 350 ORE CARS  
QNSL ORDERS 850 ADDITIONAL CARSETS





# Cars

*Specify smooth-riding  
Ride-Control® Trucks  
that are tailor-made  
for your operations!*

Rarely will you find two ore-hauling problems that are entirely alike. That's why practically all major ore shippers specify Ride-Control Trucks. They know that ASF is the only truck-design specialist in a field where specialization insures the *right equipment for the job*.

Heavy loads and severe grades present many problems. For example, the car must be compact—requiring a truck with carefully designed members and often with odd-size wheel base. Brake design, whether clasp or single shoe, must be *integrated* with truck design . . . a problem on which ASF's combined staff of truck and brake engineers can offer you constructive help. And last but not least, the truck has to ride smoothly so that the car will *work together with the roadbed*, instead of pounding itself into the repair shop.

In short, by any yardstick you use—past experience or present engineering facilities—ASF is in a unique position to design the truck that's right for *your* requirements!

## RIDE-CONTROL, A-3

Application based on ASF experience with ore car truck design

Railroad	Carsets
Bessemer & Lake Erie	1,200
Chicago & North Western	300
Duluth, Missabe & Iron Range	5,500
Electro Metallurgical	41
Great Northern	700
Gulf, Mobile & Ohio	100
Louisville & Nashville	252
Soo Line	100
Northern Pacific	600
Orinoco Mining	560
Quebec, No. Shore & Labrador	1,200*

\*Made in Canada

TOTAL

~~10,353~~  
New Total 11,753

# ASF

## AMERICAN STEEL FOUNDRIES

410 N. Michigan Avenue, Chicago 11, Illinois

Canadian Sales: International Equipment Co., Ltd.,  
Montreal 1, Quebec



## Equipment & Supplies

(Continued from page 12)

Railway Car Institute and the Association of American Railroads have announced jointly. Deliveries for the full year amounted to 35,558, compared with 81,021 in 1953.

Orders for 2,685 freight cars were placed in December, the announcement added, and the backlog of cars on order and undelivered January 1 was 15,317, compared with 14,805 on December 1, and 29,950 on January 1, 1954. A breakdown by types of cars ordered and delivered in December, and of cars on order January 1, appears in the accompanying table.

	Ordered Dec. '54	Delivered Dec. '54	On Order Jan. 1, '55
Box-Plain .....	2,001	909	8,957
Box-Auto .....	0	237	63
Flat .....	4	153	570
Gondola .....	30	45	1,203
Hopper .....	100	0	1,200
Covered Hopper .....	0	327	342
Refrigerator .....	30	177	1,725
Tank .....	500	300	1,094
Caboose .....	0	0	57
Other .....	0	25	106
<b>TOTAL .....</b>	<b>2,685</b>	<b>2,173</b>	<b>15,317</b>
Car Builders .....	1,058	1,369	8,366
Railroad Shops .....	1,627	804	6,951

The **Pennsylvania** has ordered 300 70-ton covered hopper cars from its Altoona, Pa., shops. Delivery of the cars, to be completed in late spring or early summer, will increase the PRR's fleet of covered hoppers to 2,814 units, the largest such fleet of any U. S. railroad, the PRR said.

The **Rutland** has ordered 50 PS-1 box cars from the Pullman-Standard Car Manufacturing Company. The order is part of the road's plan to budget its equipment purchases announced last June at the time it ordered 50 similar cars from the same builder.

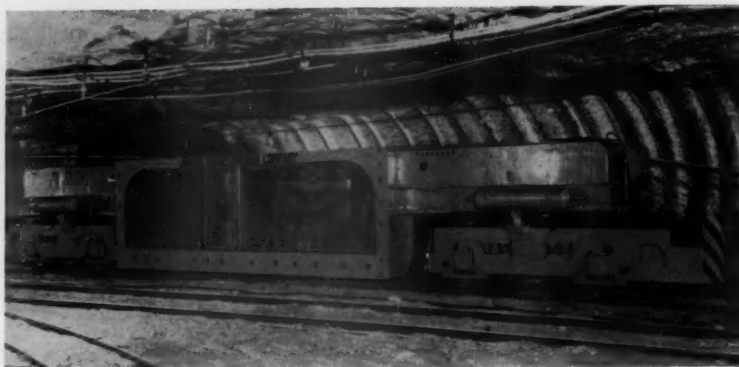
## Labor & Wages

### Railroads, Non-Ops Sign Medical Benefits Policy

A hospital, medical and surgical insurance policy covering half a million railroad employees was signed in Washington January 18 by representatives of most of the railroads and chief executives of thirteen non-operating unions.

The group insurance contract was signed with the Travelers Insurance Co. of Hartford, Conn., which will underwrite and administer the plan, with the risk being shared by 11 other insurance companies.

Employees covered by the new health and welfare plan, which was recommended by a presidential emergency board last year, will begin contributing \$3.40 a month effective February 1, and a like amount will be contributed by the railroads. Benefits



A 420-HP, 42-IN.-GAGE diesel-electric mine locomotive is in the service of the U. S. Potash mine at Carlsbad, N.M. Just 6 ft high and 47 ft long, it is designed for a maximum speed

of 37.5 mph and can haul 800 to 1,000 tons on level track. The locomotive was built at the General Electric Company's Erie, Pa., Locomotive and Car Equipment plant.

provided by the contract will become effective March 1. (*Railway Age* August 30, 1954, page 7.)

who has become chairman and chief executive officer, also retaining his post as treasurer. Mr. Rudd joined the

## Supply Trade

**Weaver E. Falberg**, assistant general manager of sales, **Joseph T. Ryerson & Son, Inc.**, has been appointed general manager of sales, and



**Weaver E. Falberg**

has been succeeded by **John A. Houston**, assistant sales manager of the Chicago plant.

The **S. J. Clark Company** has acquired the patented formula known as Coprox, said to differ from other coatings and waterproof paints in its ability to seal masonry pores. The product will be manufactured at Clark's Wethersfield, Conn., plant.

As reported in *Railway Age*, January 3, **Theodore O. Rudd** has been elected president of **The Kerite Company**, succeeding **C. R. R. Harris**,



**Theodore O. Rudd**



**C. R. R. Harris**

company in 1926 as a sales engineer. He was promoted to department manager in 1941, and to vice-president in 1945, and became a director in 1946. Mr. Harris joined the company in 1917 (*Continued on page 43*)

# *New Cars* for **Cleveland Transit System**



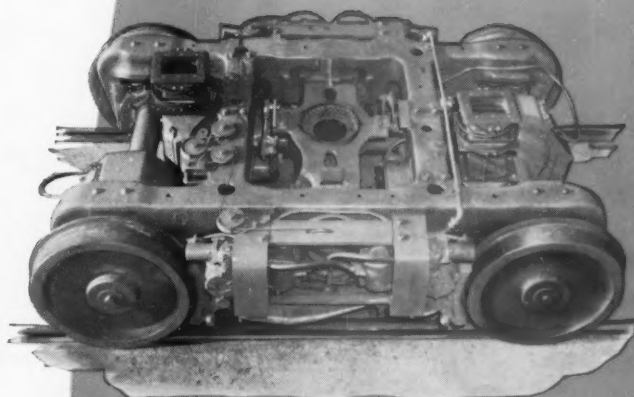
*Lot of 68 cars built by  
St. Louis Car Company*

## **Equipped with Commonwealth Motor Trucks**

**T**he 68 new rapid transit cars for the Cleveland Transit System are equipped with latest type, light-weight COMMONWEALTH Motor Trucks. One of the outstanding features of the truck design which reduces the number of truck parts, is the one-piece cast steel truck frame and bolster providing maximum strength at minimum weight and assuring freedom from maintenance expense.

Maximum passenger riding comfort, safety and reduced upkeep cost are provided with this latest design of truck. COMMONWEALTH Trucks have been furnished for over 2,500 subway, suburban, rapid transit cars and city street cars.

For smoother riding and lowest maintenance, there is a COMMONWEALTH Truck for every type of service.



*Commonwealth Motor Truck for  
Cleveland Transit System*



# **GENERAL STEEL CASTINGS**

GRANITE CITY, ILL.

EDDYSTONE, PA.

Here are the details



C-D's New

# Economy Vibrator RR Converter

Start with single vibrator low initial cost unit—convert to dual vibrator automatic changeover, *any time*. New "3600 Series" incorporates all features and rugged dependability of now famous "3200 Series".

Here's an economy converter that's tailored to conservative budgets without compromise with long service-life quality — featuring:

- Low-Cost initial investment—nearly one-half that of earlier series. At least 50% longer vibrator life expectancy.
- Sine wave output: 250 V.A. Int; 200 V.A. Cont.
- Built-in Voltage Regulation for extended tube life—a C-D exclusive.
- Instant "Emergency Service" conversion from single to dual vibrators in less than 30 seconds, without tools.
- Negligible maintenance costs.
- Choice of "Rack" or "Bulkhead" mounting.
- Available also as a factory equipped dual vibrator, switchover unit, for complete automatic initial installation.
- The "3600" unit may be supplied for mounting interchangeability in existing "3200" rack installations.

Write for our Bulletin EB-3600, Cornell-Dubilier Electric Corporation, Dept. RA 15a, Indianapolis Division, 2900 Columbia Ave., Indianapolis, Indiana. Affiliated Member A.A.R.



CONSISTENTLY DEPENDABLE  
**CORNELL-DUBILIER**

VIBRATOR CONVERTERS

For Industrial—Marine—Railroad and Appliance Services

PLANTS IN SO. PLAINFIELD, N. J.; NEW BEDFORD, WORCESTER & CAMBRIDGE, MASS.; PROVIDENCE & HOPE VALLEY, R. I.; INDIANAPOLIS, IND.; FUYQUAT SPRINGS & SANFORD, N. C.; SUBSIDIARY: RADIANT CORP., CLEVELAND, OH.

*Lewis*

## sealtite large head car bolts



Especially designed for tank car running boards, but may be used in wood wherever larger heads are required. Sealtite fins prevent turning. Beveled head provides water-tight seal, prevents tearing of wood fibers. Available in Hot-Dip Galvanized finish for Double-Life, greater economy.



Cross section of head, from above, showing fins, bevel and shank. Bolt available with Loktite Nut (2 or std. sq. nuts).

See your Lewis representative, or contact factory for samples, prices, full details. All products are manufactured in the U.S.A. to A.S.T.M. specifications.

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**BOLT & NUT COMPANY**  
504 Malcolm Ave. S. E.  
MINNEAPOLIS 14, MINNESOTA



## FIGHT POLIO!

- ✓ Polio Vaccine
- ✓ Treatment
- ✓ Epidemic Aid

**GIVE** to the

**MARCH  
OF DIMES**


**JANUARY 3-31**



## **Engineer's "guide to better handling"**

The Westinghouse Type "B" Brake Pipe Flow Indicator is just a small instrument but it gives the engineer a great deal of information as to what is happening in the brake pipe of his train. Our representatives will be glad to tell you all about it.

**Westinghouse Air Brake  
COMPANY**

AIR BRAKE DIVISION  WILMERDING, PA.

# 8 TIMES AROUND THE WORLD ...



#### FRICITION WEDGES

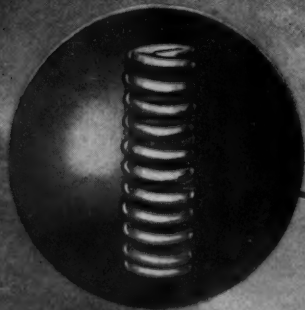
Because of large bearing areas, both flat and convex surfaces of the original wedges showed negligible wear at any point; wedges should last as long as the car

# FRICITION MECHANISM STILL IN TOP CONDITION ...

Technical Center  
Cleveland



*"Progress through Research"*



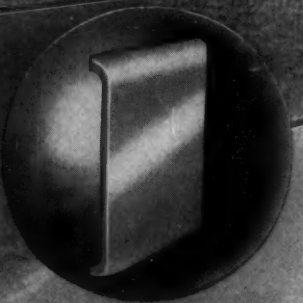
#### WEDGE SPRINGS

Original springs, still in good condition, should last the life of the car. None were broken, none had a permanent set—even after 200,000 miles



#### BOLSTER COLUMN LUGS

Only contact between bolsters and frames is with *outside* bolster column lugs. Greatest wear measured on any lug was less than  $\frac{1}{16}$ ", even less wear on vertical columns



#### FRICTION WEAR PLATE

Plates showed negligible wear and full bearing. Spring steel plates, slightly less hard than wedges, give maximum wear resistance to both wedge and plate

#### WEDGE POCKETS

Side frame pockets showed negligible wear, no scoring or gouging. Full-width bearing of wedge against side frame pocket distributes pressure evenly over large area



#### LOAD SPRINGS

Light coil showed few oversolid blows, proving efficiency of C-1 truck friction mechanism



## PROOF OF THE NATIONAL C-1 TRUCK'S LONG LIFE

The "control center" of a smooth-riding freight truck is the friction control mechanism. Hence, wear life of this mechanism controls how long the truck will continue to give you what you paid for—a smooth, "lading-conscious" ride.

A recent control center inspection of National C-1 trucks, after 200,000 miles in rugged service,

proves that the friction control mechanism is strong, powerful and long lasting—designed for the entire life of the car. Furthermore, the excellent condition of wheels, journals, bearings, and bearing wedges—all original equipment—shows that C-1 trucks hold maintenance costs to a minimum.

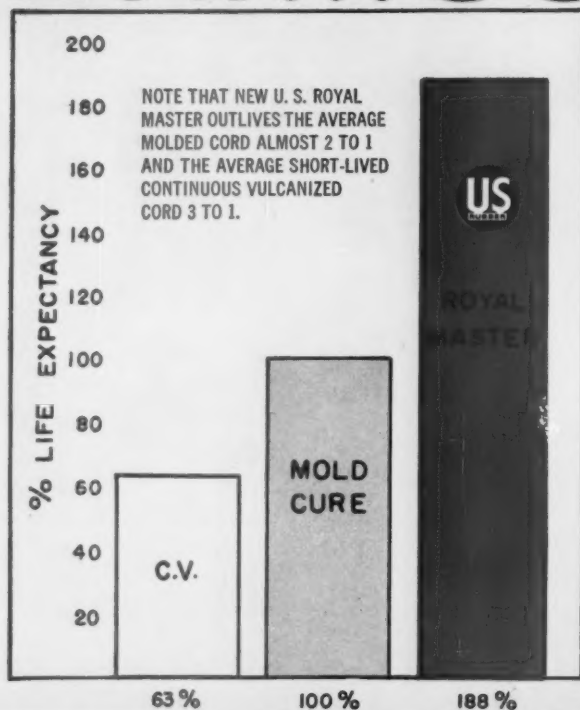
AA-518

**NATIONAL** MALLEABLE and STEEL **CASTINGS COMPANY**

Cleveland 6, Ohio

COUPLERS • YOKES • DRAFT GEARS • FREIGHT TRUCKS • SHOCKS • PIVOTS • JOURNAL BOXES

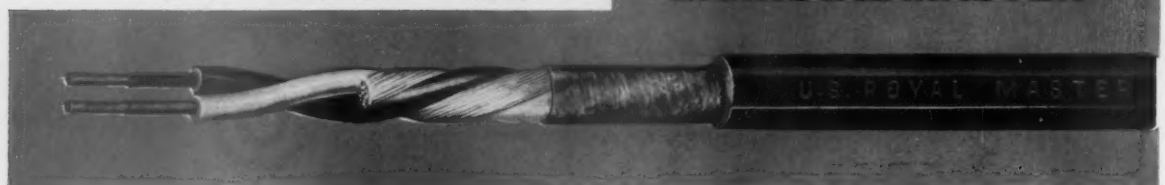
# Now... **88%** longer U.S. ROYAL



Chart—summarizing individual service factors weighted by their contribution to overall service life — shows new U. S. Royal Master Cord gives 88% longer life than the average of competitive molded cords.

LOOK FOR THE NAME—

**U.S. ROYAL MASTER**



## Superior on every count!\*

- 33.3% greater heat resistance
- 55.7% greater impact strength
- 53.8% greater abrasion resistance
- 30.6% greater resistance to cutting
- 110.3% greater resistance to tearing
- 21.2% greater tension or breaking strength
- 23.3% greater oil resistance
- 128.8% greater flexibility

\*to the average of molded cords of other makes



**UNITED STATES**  
ELECTRICAL WIRE AND CABLE DEPARTMENT

# **cord life—with NEW MASTER portable cord!**

## **Far outlasts any other cord made!**

**Service to cost ratings show new U. S. Royal Master Cord actually gives \$1.88 in value for every cord dollar when compared to the average competitive molded cord!**

Two years ago, "U. S." engineers began a *complete reexamination* of portable cord construction, service life, and the causes of cord failure.

Over 10,000 tests were made. More than a thousand cords of all leading makes, including our own famous U. S. Royal Cord, were analyzed, tested, and compared.

Every life factor was considered and carefully evaluated, alone and in its relation to overall cord performance and service life.

Backed by 64 years of experience in the manufacture of electrical wire and cable, U. S. Rubber engineers then translated their findings into an entirely new portable cord, designed to surpass any other previously made.

Extensive tests, both in the laboratory and in outside plant installations have proved this new portable cord startlingly superior in every respect!

**New U. S. Royal Master is unquestionably the finest cord you can buy!**

From every standpoint, new U. S. Royal Master is a finer, more durable cord—actually gives 88% longer life than the average of other molded cords—far longer than *any* other cord—surpassing even a *hypothetical* cord incorporating the best features of all those tested!

**Far greater value, too!** In spite of almost doubled service life, this great new cord is in the same price category as other molded cords—giving you \$1.88 in cord value for every cord \$1.00!

**Prove to yourself** the outstanding superiority of new U. S. Royal Master Portable Cord—in both service life *and* economy! Get in touch with your "U. S." distributor today!

Approved by Underwriters' Laboratories, Inc.

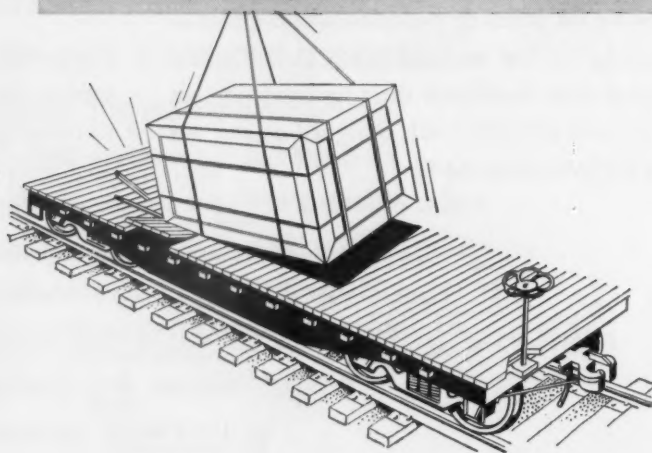
**RUBBER COMPANY**  
ROCKEFELLER CENTER, NEW YORK 20, N. Y.



## The danger lies in the

There's more here than meets the eye; almost nine-tenths of an iceberg is under water. And it's the part that's out of sight that causes the most trouble.

**It's the same with**



### FREE ANALYSIS OF YOUR LUMBER PROBLEMS!

Let us analyze your lumber problems and then discuss with you the savings that can be effected by using Koppers Pressure-Treated Car Lumber on your railroad.



part you don't see!

## untreated car lumber!

Untreated lumber is strong when first installed. But, in time, the part that's *out of sight* may be weakened by invisible decay. And when the *inner* strength of lumber is lost through decay, breakage and expensive repairs are sure to follow.

That's why more and more railroads are saving money by using Koppers Pressure-Treated Car Lumber. This lumber *stays* strong because it is fully pro-

tected against decay. Koppers Pressure-Treating Process actually *triples* the life of car members such as sills, decking, lining and running boards.

Make your maintenance dollars go farther by using car lumber protected by pressure treatment. And remember: maintenance costs due to decay damage are eliminated in cars constructed or repaired with Koppers Pressure-Treated Car Lumber.

**KOPPERS COMPANY, INC.**

Wood Preserving Division, Pittsburgh 19, Pennsylvania



**PRESSURE-TREATED CAR LUMBER**



Timken bearing shown marked "OK" after 400,000-mile test run on New York Central car #2902.

**New S/V Grease Albrex No. 1 now approved by A.A.R.  
for use in all journal bearings!**

There's a "long" story behind the OK on that journal bearing, above—a story that started five years ago in a Socony-Vacuum laboratory. That's when we first began work on S/V Grease Albrex No. 1—our new journal bearing grease for locomotives and passenger and freight cars.

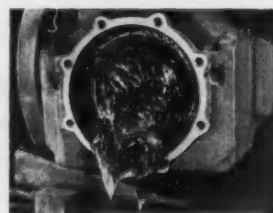
We spent 2½ years developing and testing S/V Grease Albrex No. 1 in the laboratory—then asked the New York Central to road-test it. They placed it in the journal bearings on car #2902—ran this car another 2½ years for a total distance of over 400,000 miles!

At the end of this run, bearings and grease were examined. There were no

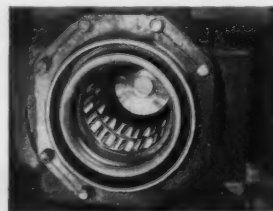
signs of wear or rust in the bearings. There was virtually no deterioration of the grease. As the result of these findings, S/V Grease Albrex No. 1 received A.A.R. approval.

Now, S/V Grease Albrex No. 1 is available to you with all these proved advantages . . . 1) stability for *exceptionally long-service life*—for big savings in time, trouble and money . . . 2) *unexcelled protection against rust*—particularly valuable for operators of refrigerator cars . . . 3) *guaranteed uniformity*—inherent in the Socony-Vacuum trade mark.

For complete details call your local Socony-Vacuum representative.



SKF bearing shown about to be examined after record run. Note "barrel-new" condition of S/V Grease Albrex No. 1.



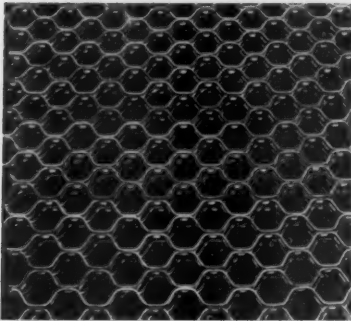
Hyatt bearing after grease was removed. No sign of wear or rust on rollers or other bearing parts.

**Socony-Vacuum Oil Co., Inc.  
RAILROAD DIVISION**

26 BROADWAY, NEW YORK 4, N. Y.



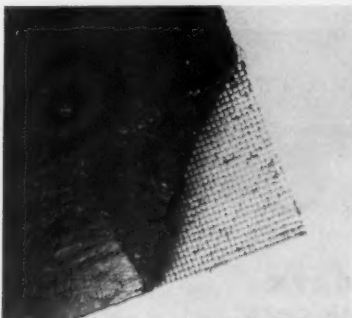
## What's New in Products



### Reinforcing Metal Grid

A reinforcing, heavy-duty metal grid, named Steel Grid by its manufacturer, has been made available to armor industrial surfaces such as warehouse floors, aisles, ramps, docks, railroad crossings, etc. It is embedded in the floor surface such as concrete, mastic, asphalt, or any other hard setting surfacing material.

It is reported that an industrial load carrying surface with the metal grid embedded will not buckle, warp, crack or rut. It is equally applicable to old or new industrial floors and traffic surfaces. *Bufnel Company, Hollywood, Cal.* •



ZONER tie pad showing corner where asphalt-impregnated felt has been pulled away from its wire grid reinforcing to illustrate construction.

### Wire-Reinforced Tie Pad

A new tie pad, consisting of a wire-mesh grid pressed into asphalt-saturated felt and further treated with an asphaltic material, is now being marketed. Known as the Zoner, it is reported to provide a flexible and resilient cushion and to establish a neutral zone between the tie and the

tie plate, thereby inhibiting abrasive action and denying access of water, grit and other destructive agencies to the top of the tie. The Zoner is designed to be self-sealing in that spikes driven through the pad are enclosed in, and sealed by, the asphalt-impregnated cushioning material.

The wire grid reinforcing is positioned to provide a metal-to-metal contact with the underside of the tie plate, thereby preventing rupture or displacement of the impregnated fibrous material of the cushion. The company recommends that a thin application of its heavy-duty coating No. 2, or similar asphaltic material, be applied to the top of the tie before positioning the Zoner. This acts as a further conditioner and sealer for the adzed surface of the tie. *Zone Company, Fort Worth 1, Texas* •



### Heat Reflective Clothing

A line of aluminized asbestos clothing—including complete firemen suits, gloves, leggings, sleeves, aprons, helmets—is available for uses where a high degree of protection from heat and radiant energy is required. The products are made from a herringbone weave, tropic-weight asbestos cloth,

treated to give it an aluminum coating. Garments made from this fabric are pliable, and according to the manufacturer have good durability and abrasion resistance. This coating is said to reflect 90 per cent of all radiant energy.

Aluminizing makes possible the safe use of a lighter weight asbestos. Metal splash will not adhere to the finish, adding further to the protection offered. *Wheeler Protective Apparel, Chicago 10* •



### Magnetic Floor Sweeper

These sweepers remove nails, wire and other magnetic materials from machine shop and foundry aisles, loading areas, etc., working on rough, uneven or paved surfaces.

The device consists of a permanently energized Alnico V magnet assembly, mounted on semipneumatic tires, with ball-bearing wheels. Handles are of tubular steel with plastic handle grips. These handles are adjustable to two positions; for manual use or for towing with a truck or other vehicle.

The manufacturer states that the units are completely safe with no danger of shock to employees and no danger of fire or explosion when used where flammable products are present. They require no maintenance other than cleaning the magnet assembly after use.

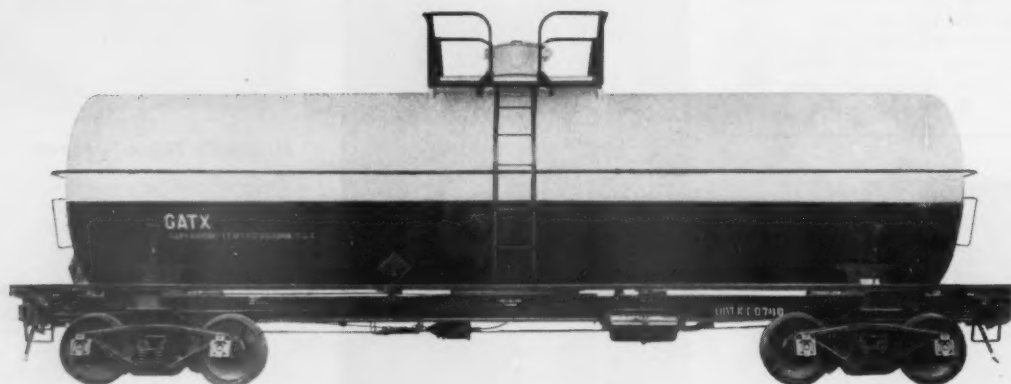
These floor sweepers are available in three models: Model 100 for light duty; Model 200 for heavy duty; and Model 300 for duty requiring high intensity magnetic attraction. Seven sizes from 12 in. to 72 in. are available in each model. All sizes are adjustable 1 to 3 in., ground to magnet. *Homer Manufacturing Company, Dept. 345, Lima, Ohio* •

# Anhydrous Ammonia— shipped best in GATX Pressure Cars

Volatile liquified gases like anhydrous ammonia ride safe and sure in General American pressure tank cars. These cars are *solid*—they're built of extra heavy plate that exceeds A.A.R. and I.C.C. specifications. And, they're insulated to prevent excessive vaporization. What's more, they're flexible in use—you can often vary the kind

of gas you ship.

Pressure cars are only one of the more than 200 different types of special tank cars in the fleet of 48,000 cars designed, built and operated by General American. If you now ship or plan to ship bulk liquids, you'll find it pays to call your nearby General American district office.



## typical products successfully shipped in GATX pressure cars

Butane • Propane • Ethylene Oxide • Propylene Oxide • Vinyl Chloride • Methyl Chloride • Ethyl Chloride

## features of GATX pressure tank cars\*

All-welded Tank Jacket and Underframe • Flued Dome Construction • Safety Dome Platform (Available) • Painting to Specification (Available) • Insulation • Special Fittings (Available).

\*Standard equipment unless otherwise noted.



## GENERAL AMERICAN TRANSPORTATION CORPORATION

135 South La Salle Street • Chicago 90, Illinois

## Why the Outlook for Railroads Is Favorable

In a recent editorial the New York Times made the observation that: "The days of majestic railroad building over new routes have probably ended, and the high-speed automobile-and-truck road, toll or free, is perhaps only in its infancy." Such beliefs about the "maturity" of the railroads are widely held nowadays. A superficial look at the available evidence might seem to support this opinion, but a more careful examination of the situation leads to an entirely different conclusion.

For instance, if railroad transportation were economically and technologically obsolescent, then how does it happen that railroads, rather than truck highways, have been built to haul iron ore out of Labrador and Venezuela? The builders of these lines, surely, had no prejudices in favor of any one form of transportation. They simply examined the facts and, from them, concluded that up-to-date railroads afford a more economical means of moving heavy traffic than equally up-to-date inland transportation by any other means. What is true in this regard in Northeastern Quebec and Venezuela is, without doubt, equally true elsewhere on the American continent.

With technology and economics both continuing to favor the railroads in the heavy-volume movement of freight traffic, how then does it happen that the railroads are continuing to lose such traffic to the highways? Several reasons can be cited—all of them, probably, remediable—but they need much more thoroughgoing attention and study than has yet been accorded to them. Among these reasons the following may be enumerated, as among the most important:

1. *Railroad rates, compared to those of competing agencies, frequently do not reflect the superior economy of railway service.* Traffic follows the comparative expense to the customer (not only of the rates, but of incidental expenses as well) of the rival forms of transportation—and will be held by the rail carriers' superior economy, only to the degree that this superior economy is reflected in the rate structure.

2. *Only up-to-date railroads can hope to compete with up-to-date highway transportation.* To achieve really economical railroad transportation, high standards of construction, equipment, yards

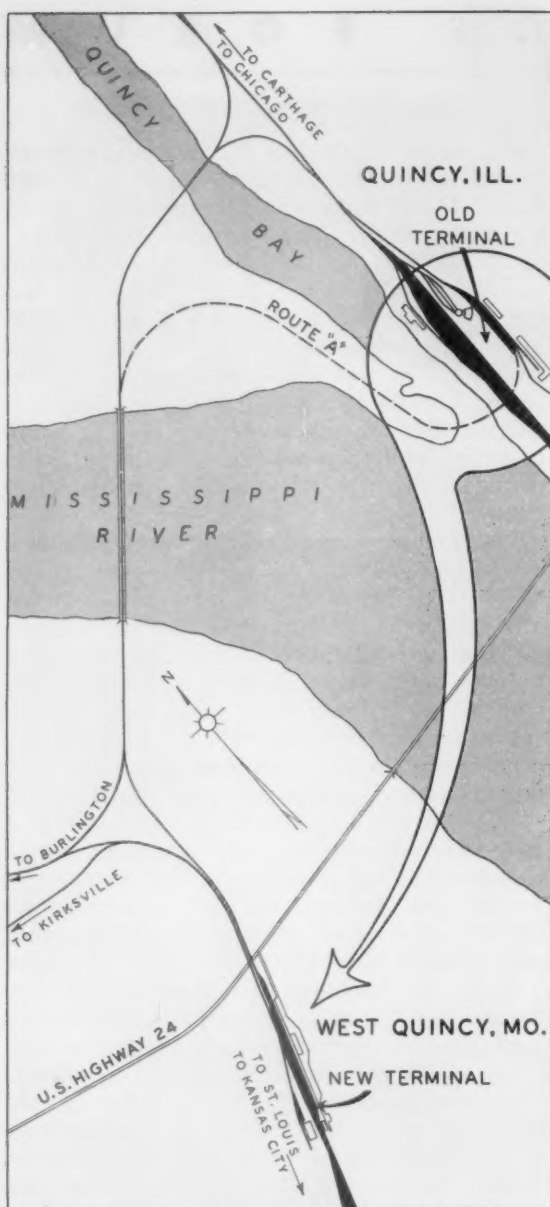
and signaling installations are necessary. It would not be reasonable to expect a railroad of the 1900 model to offer maximum competition against highway transportation of the vintage of 1955.

3. *Railroad transportation achieves its greatest economy only with relatively heavy traffic density.* It is not economical to provide a thoroughly up-to-date roadway for only a couple of trains a day, nor is it economical to run a lot of light trains. The day when railroads could afford to offer retail transportation service to "thin" traffic territories (as was possible when the only competing motive power was horses) has long since passed.

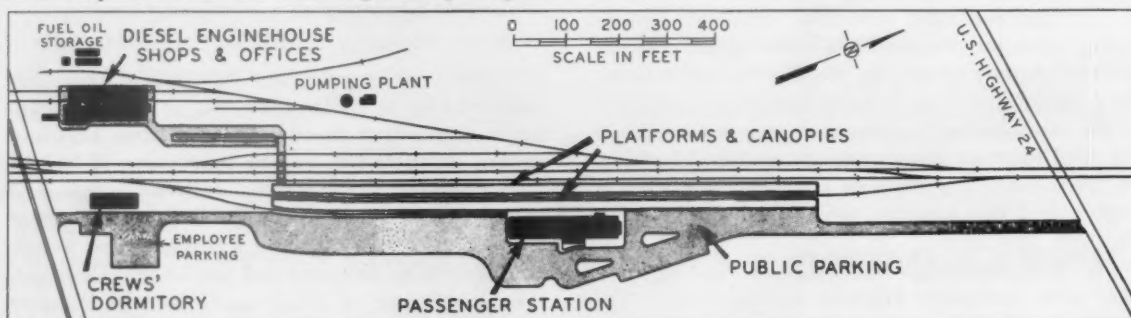
4. *The economy of railroad transportation is diluted and concealed by a lot of red-ink services which the railroads are still required to provide.* The builders of the Quebec North Shore & Labrador Railway might not have elected to build a railroad rather than a heavy-duty trucking highway, if their railroad were going to be saddled (as many common-carrier railroads are) with the expense of operating commuter trains; and with providing highly taxed urban passenger terminals.

5. *The economy of railroad transportation is considerably offset by the fact that rival agencies of transportation do not pay the full costs of the publicly provided roadways they use, whereas the railroads must recover all the costs of their service, and taxes on their plant, from their customers.* This is the handicap to railroad competitive strength which is most often criticized by railroad men. Continued effort must be exerted to overcome it. Nevertheless, this obstacle to railroad growth and prosperity is undoubtedly *not* the most important on the list—as is quickly evident from the fact that average costs of railroad service, despite this handicap, are still only about one-third those of highway transportation. It is clear, therefore, that the railroads (for regulatory or other reasons) are not making full competitive use of the cost advantage they continue to enjoy.

However extravagant the government may choose to be in its tax-financing of highways, the fact remains that the best of up-to-date highways cannot compete for volume movement of freight, over considerable distances, with up-to-date railroad service, where the latter is priced to reflect its true relative economy. Railroad men, supply manufacturers, shippers and public officials should take cognizance of this central fact, and govern their actions accordingly. Technology and economics are with the railroads.



**RELOCATION** of terminal from downtown Quincy to West Quincy eliminates devious train routes and provides more adequate facilities for both freight and passengers.



**NEW TERMINAL** is conveniently located for passengers adjacent to highway leading directly into downtown Quincy.

## BURLINGTON MOVES TERMINAL . . .

# Why They Crossed

An excellent example of how a terminal can be re-located and modernized to better serve the requirements of present-day railroading is found on the Burlington at Quincy, Ill. Movement of most of the road's terminal facilities from their original location in downtown Quincy across the Mississippi river to West Quincy, Mo., permitting the rerouting of trains and the retirement of 1¼ miles of trackage, including a river bridge, has resulted in operating economies and the saving of about one hour on all through-freight schedules and 15 min in passenger-train handling.

Quincy is the hub of Burlington main lines extending between Chicago, St. Joseph, Mo., and Kansas City, and between Burlington, Iowa, and St. Louis, as well as secondary lines between Rockport, Ill., and Burlington via Carthage, Ill., and between Quincy and Kirksville, Mo. Sixteen passenger trains and a minimum of 10 freight trains presently operate through Quincy each day, in addition to way freights which are not carded. Freight-train crews change at Quincy and all passenger trains stop at that point.

### Old Facilities Outmoded

The map shows the old situation at Quincy and the relocated facilities. With the old setup all trains were operated into downtown Quincy, where freight yard and mechanical installations, as well as all passenger facilities, were situated. Trains had to enter and leave the freight yard from the north end. Furthermore, the yard was unable to handle long trains on any tracks without doubling over. Passenger trains made a "loop" into and out of the passenger facilities over "Route A" (map) which included a long bridge over Quincy bay on an 11-deg curve.

This arrangement of both passenger and freight routes meant, in effect that all trains passing through Quincy followed devious routes from the various main lines to the terminal facilities. Through trains using the main line between St. Louis and Burlington along the opposite side of the river had to cross the river to the terminal, and

Entrance to new freight yard, of nine tracks, some holding 160 cars, is at extreme left in above plan.

# the River

Passenger and freight terminals at Quincy, Ill., moved across the Mississippi to eliminate circuitous train movements

then recross it upon departure. Another complication arising from the location of passenger facilities in the downtown area was congestion of automobile traffic.

## Advantages of New Location

It was to overcome these disadvantages that the decision was made to move the terminal to West Quincy. The site chosen is convenient for passengers as it is adjacent to US Highway 24 leading directly into downtown Quincy over a free bridge. The line on which the new terminal is located is used by all trains in passing through the Quincy area. Hence, circuitous routing of trains is eliminated. "Route A" has been retired, as has its bridge crossing over Quincy bay. The old freight yard in Quincy has likewise been retired except for a few industry tracks, and all of the station buildings, yard buildings and mechanical facilities have been abandoned. Only the freight house has been retained in the downtown area.

The new installation at West Quincy comprises an attractive passenger station with large parking area and coach yard, a nine-track freight yard capable of handling 160-car freight trains without doubling, a yard office and mechanical facilities and a dormitory for train crews.

The new station is a flat roofed, single-story structure styled along modern lines and attractively finished with lannon stone over concrete block. The roof is of poured-



PASSENGER station is styled along modern lines and attractively finished with lannon stone over concrete blocks. The roof is of poured-in-place concrete.



WAITING room, concourse and air-conditioned lunch-room have exposed lannon stone wall areas, terrazzo floors and acoustical-tile drop ceilings with fluorescent fixtures.

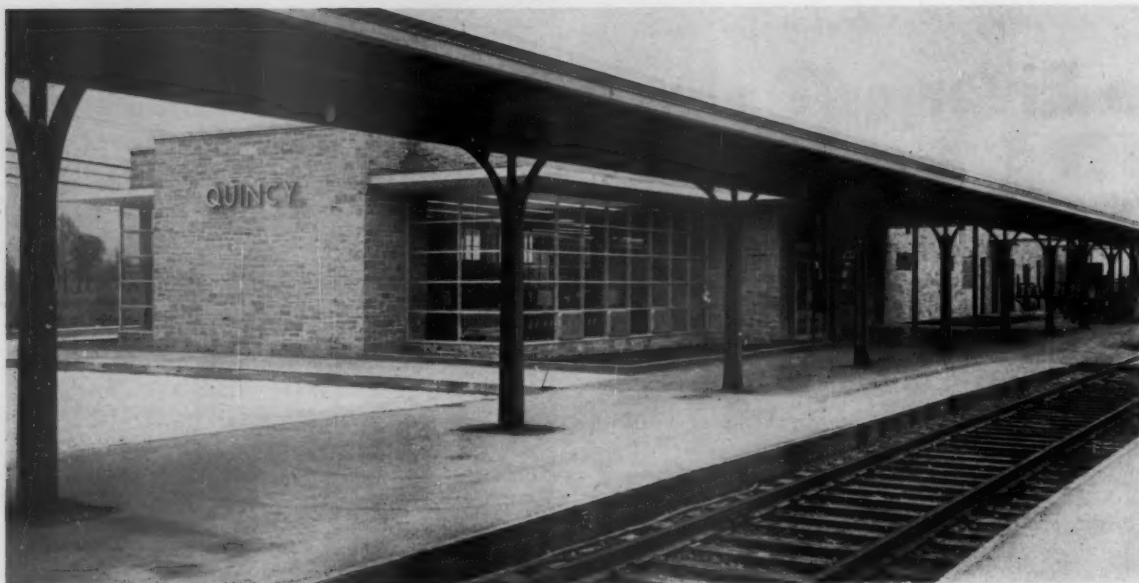
## TRAVELERS' AUTOS TAGGED FOR STATION PARKING

Out-of-town travelers may leave their automobiles in station parking lots for the duration of their trip, under a new parking identification system the Burlington has placed in effect at its new Quincy, Ill., west station and also at Omaha.

The heart of the new system is a special windshield sticker to be obtained from the depot ticket agent before departure. Affixed to the windshield, the sticker indicates the type of car, license number, and trains and times of departure and return of the owner. Thus, railroad special agents are able to identify all vehicles which have proper reason for being parked in station lots beyond normal daily parking periods. A duplicate portion of the sticker is retained on file by the ticket agent.



FLOOR-TO-CEILING windows take up most of the side-walls and a portion of the end wall in the waiting room.



**CANOPIES**, each 1,090 ft in length, provide protection from weather on the two passenger platforms adjacent to the tracks.

in-place concrete. The building contains a waiting room, concourse, ticket office, lunchroom, passenger agent's office and storage, utility and baggage rooms, as well as a technical equipment room, express and baggage offices and an express facility room.

#### **Large Windows Employed**

The focal point of the station's interior is the waiting room where floor-to-ceiling windows take up most of the two side walls and a portion of the end wall. This extensive use of fenestration in the waiting-room area not only provides an abundance of natural illumination but also gives an unobstructed view of the station tracks and platform. Interior features include extensive use of exposed lannon stone, gray terrazzo floors, and acoustical tile drop ceilings with recessed fluorescent lighting fixtures.

The decorative ensemble features gray-blue and medium-green tones, complemented by floor-to-ceiling draperies and beige-and coral lounge-type furniture. All exposed woodwork is natural finished.

A concourse with vestibule entrances sets the waiting room apart from the other portions of the building. Adjacent to the concourse are the lunchroom and ticket office, which are separated from each other by a corridor to the baggage and express rooms. The lunchroom has a glass-wall partition on the concourse side, which imparts the feeling of expanse to the area. There are facilities for 37 persons in the lunchroom. It is completely air-conditioned.

#### **Two Types of Heating**

Heating in the building is supplied by a combination of indirect warm air and forced-circulation hot water. The waiting room, lunchroom and kitchen employ separate indirect warm air units, the air being heated by

steam coils. Ducts for the heating system are carried in J-M Transite pipe under the station floor. Other portions of the building are heated by unit heaters and hot-water convector-type radiators. Steam for the heating plant is supplied from a central power plant located in the new enginehouse.

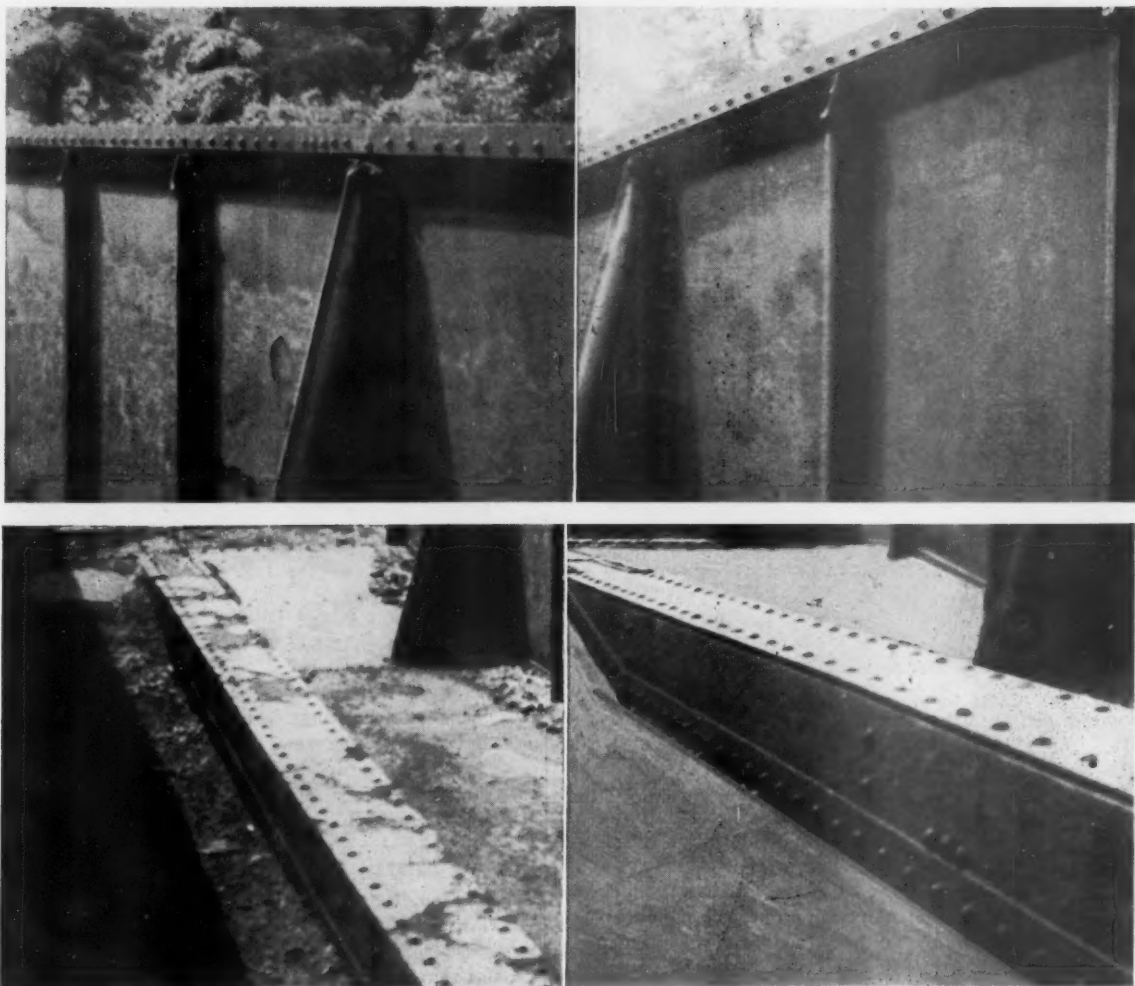
The station, 226 ft by 40 ft in plan, is provided with an extensive overhanging canopy system around the building. In addition, two 1,090-ft structural-steel canopies serve the platforms adjacent to the loading tracks. The platform area, the auto parking area and driveway to the station are lighted by mercury vapor lamps, while station signs on each end of the building are illuminated by floodlights.

Some 720 ft south of the station is the new enginehouse. This building is of steel rigid-frame construction with a corrugated Transite roof and walls. Side walls employ extensive areas of flat-drawn translucent plastic for natural illumination. The plastic material was chosen in preference to glass because of its higher strength, durability and ease of maintenance. The enginehouse contains two tracks with inspection pits running the full length of the building.

Adjoining the enginehouse is a utility and service structure 162 ft by 27 ft in plan. It houses a yard office, demineralizing plant for treating diesel engine water, a storehouse for parts, central power plant, and a foreman's office.

A two-story brick structure opposite the enginehouse provides a train crew dormitory which, in addition to sleeping quarters for crews, has locker rooms, a lunchroom and washroom and toilet facilities.

In conjunction with the terminal relocation project, existing CTC installations have been revamped to accommodate the new facilities. Included are power switches and remote-controlled interlocking signals serving yard connections with the main line. The CTC system is controlled from the West Quincy yard office.



THE DIFFERENCE between the sides (top) and bottoms (lower) on a painted car (right) after 27 months service and unpainted inside surface (left) after 15 months.

## ON THE INSIDE OF GONDOLA CARS . . .

# A New Use for Paint

The Chicago & Illinois Midland expects to save about three times the cost of each protective application during its two-year life

A little over two years ago the Chicago & Illinois Midland made an experimental application of a new type of paint to the inside of a gondola car. The purpose was to reduce corrosion of the sheets, the principal reason their renewal is required. Favorable results with the trial application have led the road to extend the use of the new paint to an entire series of gondola cars.

This decision was based on this economic analysis:

Normally gondola sheets last about 13 years and cost \$2,600 per car to renew, or about \$200 per year. An application of the new paint costs \$105 for the interior and lasts two years, for a cost of approximately

\$50 per year. The C&IM figures that each painting should add two years, or \$400 worth, of life to the sheets for the \$105 cost for labor and materials.

The new paint is Sherwin-Williams Carclad. Its texture is more akin to enamel than paint, and it does not become brittle with age, which is the key to its success in gondola service. The C&IM has found that it is resistant to the corrosive action of coal and that it endures surface friction from loading and unloading for periods of about two years.

The first application of Carclad was to a 70-ton gondola on June 18, 1952. Favorable results with this



NEW BOX CARS in green with a red stripe and white lettering get the higher gloss paint for better appearance.

car led to a program to paint 100 more of these cars during 1954 as they were being rebuilt at the road's Taylorville shops. An additional 62 gondolas are scheduled to get the paint in 1955.

Both in handling and application Carclad is quite similar to conventional paint with but one minor exception. The activator normally contained in primers and paints is separate in the Carclad primer (called Griplad) and is mixed with the primer and thinner just prior to application. Other than that the procedure is the same as with regular paints, from cleaning the surface by blasting with metallic grit to spray gun application cold. One coat of primer and two of finish are applied inside a building.

#### **Painted Inside and Out**

The gondolas are being painted both inside and out with this new paint. The average job requires per car about five gallons of primer, 2.5 gallons of activator and 4 gallons of thinner for the primer coat. The finish coat takes thirteen gallons of Carclad and eight of thinner. The cost of painting the entire car with this paint and primer is \$227. The increase over the cost of painting the outside with conventional paint and leaving the interior unpainted—the previous regular practice—is \$129. Of this, \$105 is to paint the inside and \$24 the extra cost for Carclad on the outside.

The C&M is also applying this finish to 300 new box cars. These are painted green with a red stripe and white stenciling. The extra cost ranged from \$32.40 to \$48.55 per car, depending on whether it was applied to all areas or whether certain sections, such as the ends and the underframe, were not covered with this finish.

## Benchmarks and Yardsticks

**IN THE PERSON** of William B. Given, Jr., chairman of the American Brake Shoe Company, the railroad supply industry has one of the country's outstanding leaders in the art known as "executive development"—the selection and training of competent men for positions of responsibility in industry. Mr. Given is not only an able practitioner in this important area but, just as important, he is able to pass along what he knows to other people; and has frequently done so by speech and the printed word.

**For example,** in the current issue of the Harvard Business Review, Mr. Given has an article entitled "Engineers in Management." Drawing upon the experience of his own company, he relates that, years ago, this company was proud of the fact that it had *one* engineering graduate on its management team. At that time, the company was able to get along very well on what Mr. Given calls "barnyard products."

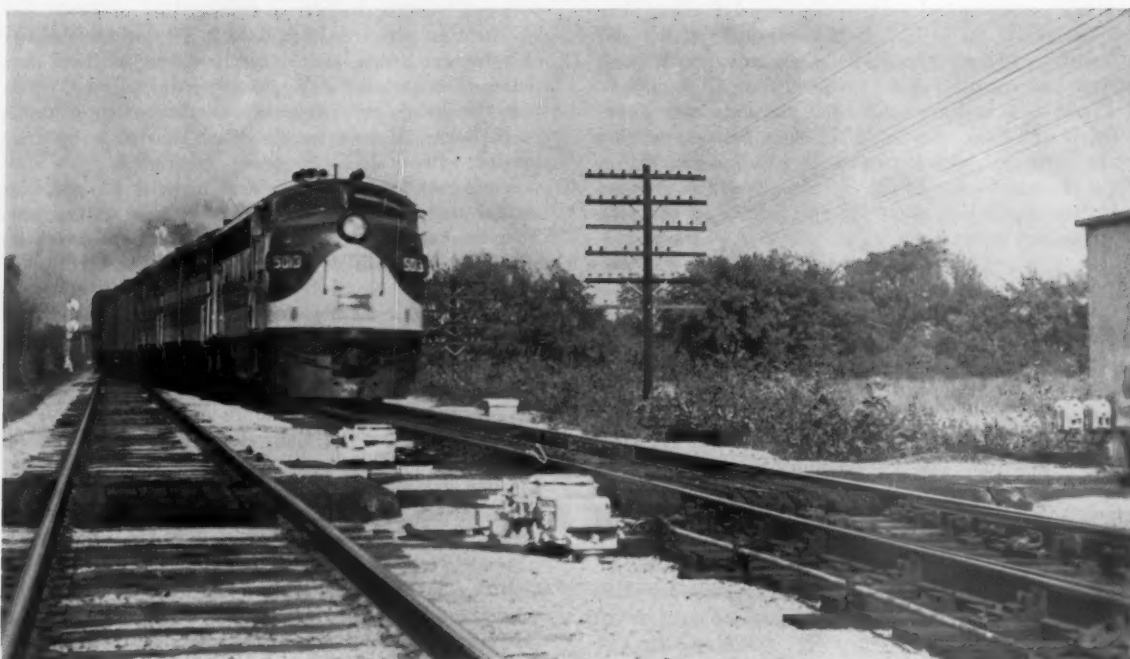
**Now, the picture has changed.** Of 25 top managerial positions in the company, 15 are held by graduate engineers, and 6 more of the 25 have some engineering training. The engineer is now definitely recognized as having an important place—arithmetically, perhaps, *the* most important place—in the management of large enterprises; but at this point Mr. Given comes along with a word of caution. He quotes a Westinghouse officer as follows:

"Many engineers do not believe in the importance of things which cannot be measured—such things as attitudes, emotions, customers, traditions, prejudices. As a consequence they fail to deal with those things which cannot be solved by logic alone. Yet the non-logical (not illogical) is the crux of most business."

**Then Mr. Given goes on to say:** "Many times problems arise either in human relationships or in probing into the unknown when an imaginative approach becomes much more important than an analytical or judicial one. Guesses and hunches become necessary. Attempts to depend on charts and formulas rather than on intuition and judgment can often lead to a wrong answer." He quotes one of his associates as saying that, in addition to his technological competence, the engineer needs to acquire humility—to overcome his tendency to overestimate the "invincibility of the scientific method."

**This brief review** falls far short of doing justice to Mr. Given's thoroughgoing exposition of this important subject. Those interested (and most railroad men should be and probably are) will do themselves a favor if they will get hold of the magazine and read the entire article.

J.G.L.



TRAINS CROSS OVER to the other main track and keep going rather than stopping on a siding.

## Both Ways on Both Tracks with CTC

How the Frisco has increased track capacity; eliminated train delays; reduced track maintenance expenses and eliminated sidings by installing crossovers with power switches and signals controlled by dispatcher

On 40 miles of double track between Kansas City, Mo., and Paola, Kan., the St. Louis-San Francisco has installed power-operated crossovers and signals in a centralized traffic control system, by means of which trains now are run both ways on both tracks, as if on two parallel single-track main lines.

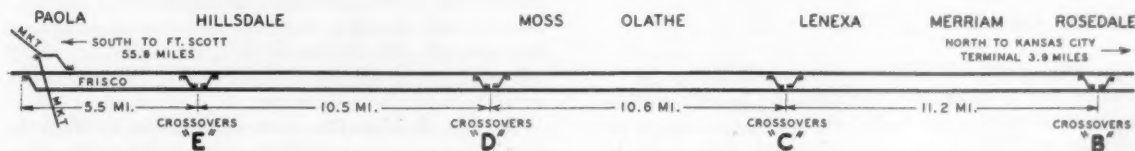
With double crossovers about 11 miles apart, faster trains are run around slower ones, thus keeping all trains moving, rather than allowing slower ones to lose time on sidings, or to wait in the yard for one track to be cleared. Trains are authorized to make diverging moves over the crossovers at speeds up to 50 mph. As 60 mph is the maximum permissible speed anywhere on the division for freight trains, they lose very little time in a move from one main track to the other, as compared to the "straight" track route.

An added benefit of the new signal system is that large mechanized track crews can work uninterrupted for an entire eight-hour shift on a section of track between two crossover locations while trains are routed over the other track.

### Traffic Characteristics

The territory involved is part of two Frisco through routes: (1) Kansas City through Fort Scott to Tulsa, Oklahoma City, Fort Worth and Dallas, and (2) Kansas City through Fort Scott and Memphis to Birmingham and points in Florida.

In addition to Frisco trains the Kansas City-Paola section also handles four passenger trains and at least eight freight trains daily for the Missouri-Kansas-Texas,



THE NEW DOUBLE crossovers are about 11 miles apart.

and two passenger trains for the Missouri Pacific. Thus the total daily traffic includes 12 passenger trains and about 18 to 22 freight trains daily. Counting extra trains the total may range from 30 to 40 trains.

From MP4 in Kansas City the grade ascends southward most of the way to MP13 near Lenexa, ranging up to 1 per cent, with curves ranging up to about 4 deg. From Lenexa south to Paola, 29 miles, the railroad traverses prairie with short rolling grades most of which are less than 0.8 per cent.

### **Three Sidings Previously—None Now**

Formerly there was a southbound siding at Lenexa, just south of the crest of the 9-mile southbound ascending grade. At Moss and at Hillsdale a siding was located between the main tracks, with switches at both ends connected to both tracks. The switches at these sidings were operated by hand-throw stands. As explained by the dispatcher, he usually figured about 10 minutes for a freight train to slow down, stop, and enter a siding. About the same time was required for a train to depart from one of these sidings. Therefore, total delay to a freight each time it took siding was 30 to 40 minutes or more. A further complication was that under timetable and train order operation, the dispatcher had no ready means of knowing whether a freight train had entered one siding or was proceeding to the next one in order to get out of the way of a following train.

### **Peaks of Traffic**

Operating difficulties were increased because most of the trains are bunched in two peaks; northbound in the morning and southbound in the evening. Four of the southbound passenger trains leave Kansas City between 9:10 p.m. and 11:25 p.m. Ordinarily a southbound freight train should run from the Kansas City yards to the crest of the grade at Lenexa in about 40 minutes. But, under the previous method of operation, if a freight on the road at this peak period had difficulty ascending this hill some of the following passenger trains would be delayed. In a great many instances, southbound freights were held in the yard at Kansas City, rather than run them out ahead of passenger trains.

Similarly, four northbound passenger trains are due in Kansas City between 6:40 a.m. and 8:25 a.m. The dispatcher often had to decide whether to run northbound freights ahead of passenger trains and thus take chances of delays to the passenger trains, or to hold the freights at Paola and take the consequences for delays to these freights. In short, the previous practice of double-track operation, right-hand running, with hand-throw sidings and train operation by timetable and train orders, was not satisfactory because numerous train delays resulted.

### **Benefits Are Many with CTC**

A study showed that the track capacity could be increased and train delays eliminated by installing crossovers with centralized traffic control, including power switches and signals for authorizing train movements by signal indication. Now, with the CTC, the dispatcher

does not hold the freights at Kansas City or Paola, but lets them go when ready to depart. He runs them ahead of passenger trains, and as required crosses them over to the other track to let the passenger trains go by. Or he runs the freight on one track and the passenger trains on the other, in the same direction. Thus all trains keep moving, without delays on sidings or in yards.

The system is so flexible that there is no need for sidings to be used by through trains in this territory. Therefore no power switches or CTC signals were installed at the sidings at Lenexa, Moss and Hillsdale. If and when these sidings are not needed for storage or as house tracks, they can be removed.

In order to operate this system successfully, the crossovers must be designed so that trains can diverge from one main track to the other without losing much, if any, time because of reductions in speed. In this territory the maximum speed for freight trains is 60 mph and for passenger trains, 70 mph. The new No. 20 crossovers are 386 ft long, and include 39-ft curved switch points. Trains make diverging moves over these crossovers at 50 mph without objectionable sway of either freight or passenger cars.

It is one thing to provide crossovers for 50 mph operation, and something else to provide signaling to direct an engineman to bring his train up to and through such a crossover at the full speed for which it was designed. The Frisco solved this problem by a simple variation from standard practice. When a crossover is reversed for a train to diverge from one track to the other, the "home" signal displays the Diverging Clear aspect, red-over-green, and the signal in approach displays the Approach-Limited aspect, yellow-over-green over a triangle. This involves a special marker consisting of a piece of sheet metal in the shape of a triangle and painted aluminum with a 1-in. black stripe around the edge.

This special marker, in combination with the yellow-over-green, tells the engineman that he may approach the next signal at limited speed, i.e., 50 mph. Without such a special marker, the yellow-over-green aspect on an approach signal means the next signal at medium speed, which is 30 mph.

### **Where Crossovers Were Located**

Several important factors determined the location of the four new double-crossover layouts. If no other factors were involved, the crossover layouts most logically should be spaced at equal distances if the track were level; or on an equal time-distance basis where grades and curves affect speeds. However, other factors result in shifting the locations; for example, to get the crossover off a curve and onto tangent track. Also, locations were shifted in some instances to avoid highway crossings and bridges. As a result of all considerations, the intervening distances are as indicated on the plan.

After the project was in service a short time, the dispatcher had determined the running time on different sections and was able to plan moves on close timing. For example, 40 minutes B to C for a freight, or 20 minutes for a passenger; 15 minutes C to B for a freight, or 10 minutes for a passenger.

On this division the track maintenance is done by district gangs, equipped with on-track machines. To utilize these machines efficiently they should be allowed to work

continuously for 8 hours each day without being required to clear the track to allow trains to pass. This was not practicable with the previous method of train operation. The track machines had to clear the main track, and the trains were required to reduce speed to 10 mph, which for freights meant that they had to stop first, then proceed.

Now, with the new system, a section of track between two power crossovers can be given over for 8 hours to a mechanized track crew, and in the meantime all trains of both directions are routed over the other track. Thus the track machines are used much more efficiently, and the trains encounter less delay because of track work than before.

Previously the men on motor cars knew that southbound trains would be on the southward track, and northbound trains on the northward track, and the dispatcher could issue fairly good information concerning when to expect each train. In the new system, with flexible operations of trains, the dispatcher, by watching his illuminated diagram, can see the progress made by each train, and with this minute-to-minute information he lines up routes on one track or the other as required to keep all trains moving. For further protection a complete system of motor car indicators was installed as part of the signal system.

Between crossover locations there is a separate set of motor car indicators for each track. These indicators are the light type mounted in front of a black sheet-metal background on a pipe mast. In each indicator the electric lamp is inside a fresnel lens so that the lamp

can be seen from the track or from any direction along the tracks. The lamp is lighted when no train is approaching or is dark when a train is approaching. The indicators applying to the righthand track going north are on the east side; and those for the other track are on the west side.

The indicators are spaced so a man on a motor car is seldom out of sight of one except on straight track. The motor car indicator system, including a total of 116 indicators, may be said to be "continuous" because it is effective all the time for trains on both main tracks on the entire territory. A motor car "set-off" is located at each indicator, and at each such set-off there is a platform to move a car from one track to the other. If the indicator shows that a train is approaching, a man has time to get his motor car off the track before the train arrives.

When approaching a layout of power-operated crossovers, a man on a motor car must know (1) that no train is approaching on the track which he is on, and (2) that no line-up has been set up to route a train from the other track to the one he is on. This information is afforded at each double crossover layout by two indicators facing south and two indicators facing north. These indicators are made of discarded electric semaphore lamps using special horizontal wide-angle clear glass lenses.

This CTC project was planned and constructed by railroad forces, under the direction of R. W. Troth, superintendent of communications and signals, the major items of equipment being furnished by Union Switch & Signal Division of Westinghouse Air Brake Company.

## How Does It Feel to Be Free?

- British traffic officer describes effect of new "climate" for railways in his country—particularly agreed rates
- Canadian analyst describes public interest in railway freedom

Of great significance to railroad men in the U. S. was the freeing of the government-owned British railways to meet competition where they find it by the Transport Act of 1953 (summarized in *Railway Age*, May 4, 1953, page 60). This measure of freedom went beyond anything even in the talking stage in this country.

How the new freedom is working out, and what it means to the railways, were described by David Blee, chief of commercial services of the British Transport Commission, in hearings before the Royal Commission in Canada on "agreed charges," recently concluded. Since Mr. Blee lays down the rate-making policy for all of the six regional managements of the British Railways, and, in addition, has the first hand duty of negotiating with national groups of shippers, he knows what he is talking about.

S. W. Fairweather, vice-president, research and development, of the Canadian National, a chief witness for the Canadian roads, explained to the commission

how the public had a selfish interest in granting greater rate-making freedom to the railways.

"Agreed charges"—contracts between the railways and shippers granting special low rate for a guaranteed percentage of a shipper's business—have been in effect in Canada since the late Thirties. Thus far, however, they have not been applied to a substantial portion of rail traffic, chiefly because the railways have been hog-tied by restrictions in their use. Even this small area of freedom has been challenged—most recently by certain so-called Prairie provinces, which contend that agreed charges on manufactured commodities from Ontario to British Columbia prejudice the intermediate provinces (*Railway Age*, October 25, 1954, page 11).

In October, a Royal Commission, headed by Justice W. F. Turgeon, initiated a Dominion-wide series of hearings on agreed charges. Among the things considered was a proposal by the Canadian roads that they be permitted to make such charges effective without

Board of Transport approval in 15 days after filing, and that there be eliminated the right of third parties who have not real interest in the transaction to make "nuisance" protests against agreed charges.

The issues before the Royal Commission were described by the railways as "fundamental." For example:

"This proceeding is but the initial step in a struggle which may be long drawn out, to endeavor to obtain for the railways their release from anachronistic and outworn fetters which impede dealing with day-to-day business problems in an ordinary business-like way—meeting competition as any alert businessman meets it," Hugh O'Donnell, counsel for the Canadian National, argued.

"These amendments are not put forward with a view to trading or bargaining. This is not a time for compromise," said C.N.R. counsel. He pointed to the complete rate-making freedom now enjoyed by the British railways after a long history of regulation of all forms of transport and said the Canadian railways were now asking the first step be taken in that direction.

Dealing with protests of the meat packing and trucking industries against the proposed amendments, Mr. O'Donnell described the former as "primarily concerned with the regimentation of their own industry" while the latter were trying to use the restrictive provisions of the Transport Act, which does not apply to trucks, "for their own protection and relief." Railway rates are an "umbrella" for use by the trucking industry.

"Notwithstanding the enormous growth physically and financially of the trucking industry since 1938, they still maintain they are being and will be destroyed," said Mr. O'Donnell. "The real situation is to the contrary."

### Regulation in Britain

Describing the background of the new regulatory freedom in Britain, Mr. Blee pointed out that "there never has been, and there is not, any condition whatever attached to the traffic license of the road operator as to where he may go and what he may do—or as to what charges he may make."

The 1953 act returned the truckers both to private enterprise and to free competition, with no restriction or control on rates or charges. This set of circumstances, according to Mr. Blee, "led Parliament in their wisdom to decide that, if the railways under those circumstances were to live and to pay their way and give the vital national service it was their public responsibility to afford, then steps must be taken with the objective of making the railways as free in competition as the road operator."

Actually, asserted Mr. Blee, the broad effect of changes "is really to turn the wheel a full circle over a period of 100 years, for it has brought the railway charge in Great Britain back virtually to the same kind of limited regulation which characterized the first enabling acts [i.e. the legislation which authorized the building of the railways in the first place]."

One restraint on the railroads' freedom under the act is that, in situations where it can be proved that the railway has a monopoly on the movement of particular goods or of the freight of a particular shipper, then shippers so affected have the power to complain to the Transport Tribunal that a rail rate is unreasonable or

unfair. To be able to challenge a rate, the shipper must prove that no competition is possible.

Under the new legislation there also remains upon the railway—and only upon the railway—an obligation to produce a scheme of maximum rates. This obligation is largely to avoid injustice in those fields where the railway continues to exercise a monopoly, if any. Nevertheless, Mr. Blee insisted, "there is a very large amount of freedom accorded by the current legislation."

During the course of the inquiry a member of the commission used the word "weapon" to describe the new rate freedom of the British railways. On this Mr. Blee remarked: "This is not a new weapon at all, my lord. These are exactly the same business tools as have been used by the road haulage industry for the last 25 years, the free use of which has been largely denied to the railways."

The British traffic officer was also asked whether it was true that, under the new British statutes, undue discrimination, personal discrimination, and "all those earlier concepts of transport economics" had been discarded. Mr. Blee replied: "My lord, these are not concepts of transport economics. They are concepts of regulation."

### Speedy Rate Making

Mr. Fairweather contended that the railroad ought to have the right to put agreed charges into effect speedily, and without "long and vexatious delays" by third parties. "I conclude that agreements freely entered into between parties in the competitive field should differ in no substantial degree from any other civil contract. . .

"There should be freedom of action by the railroad just as there is freedom of choice by the shipper. The shipper, by the fact of competition, has a freedom of choice. Now, I think that under those conditions we should put the railway in the position of being also free. I know that in general business if one met with another to conduct a negotiation he would hardly call it business to say, 'Before I conduct these negotiations with you I must go and consult so-and-so and so-and-so, and so-and-so, and publish everything that we are talking about, lest in the process something might arise that might step on the toes of this or that or the other person.'"

Asked by counsel whether he thought a "competitor of a shipper should be notified to sit in and know what is going on," Mr. Fairweather replied:

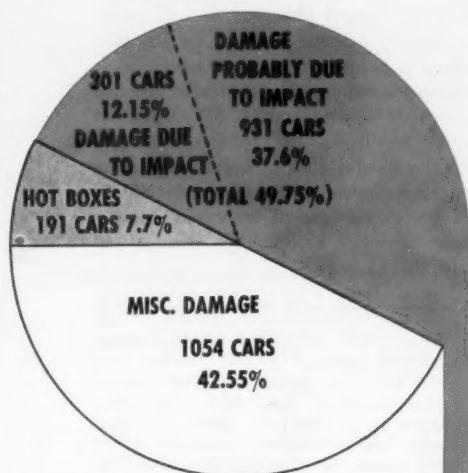
"If I go to a store and get a bargain . . . or if I get a bargain by private negotiation in the open, free market, I do not see that that . . . would justify somebody else coming along and saying it is not fair. The extent of the bargain I get is always controlled by the freedom of the market, and it cannot get beyond very narrow limits because the market sets the price."

Mr. Fairweather argued that the railroads should have complete freedom in the competitive field to fight for net revenue, in which the public has great interest. "The railroads need that net revenue to support a huge structure of freight rates that apply in the non-competitive territory, most of which, as applied to the nature of its job, are so low that if the railway had only those rates, the railway would not be able to receive enough revenue

(Continued on page 40)

# Cut Car-Repair Costs?

Analysis of crippled-car reports says **YES!**



Careful check of reports on 2477 bad-order cars indicates that roughly 50% of running repairs result from damage definitely or probably caused by excessive impact. Much of this damage can be prevented.

## ANALYSIS OF CAUSES OF DAMAGE

Total number of orders handled in shop (railroad owned cars and foreign cars) over 30 day period 2,477.

	No. of Cars	Per Cent
Repairs definitely due to excessive impact .....	301	12.15%
Repairs probably due to excessive impact .....	931	37.6%
Repairs due to hot-boxes .....	191	7.7%
Miscellaneous repairs .....	1,054	42.55%

30-DAY CHECK MADE JANUARY 1934

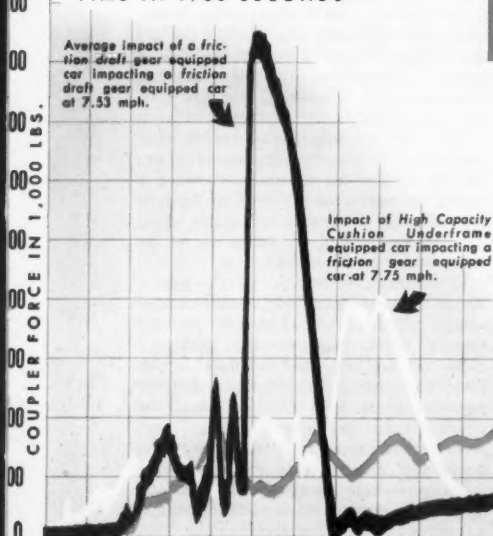
Surveys have shown that almost 80% of classification yard impacts are at speeds in excess of closing speeds for conventional draft gears and that more than 60% are in the range of 5 to 10 mph., a range in which the Waugh High-Capacity Cushion Underframe provides a high degree of protection.

## ...and oscillograms tell **HOW!**

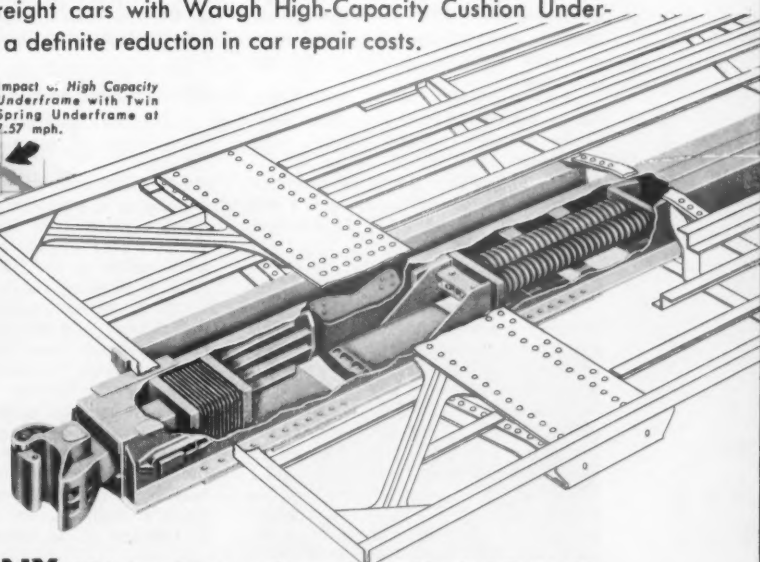
Here is a carefully-instrumented comparative record of friction gear performance and Waugh High-Capacity Cushion Underframe performance under identical test conditions. What greater performance proof could one ask?

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## FEELING FREE

(Continued from page 38)

to pay its expenses. Therefore, every dollar that the railway succeeds in winning in the competitive field is an assist, as they say in sporting circles, to the goal of supporting a rate structure at the lowest possible level in the non-competitive field."

Elaborating on this theme, the witness asserted, "the people in the non-competitive areas should cheer the railways whenever they see the railways win a few honest dollars in the competitive field, because they may say to themselves: 'Well, there is some money that I won't have to find.'"

Mr. Fairweather emphasized that, as a development officer of the railroad, he and his colleagues "are very much alive to the impress of high rates on the marginal producers of this country. We see it as one of the most alarming by-products or main products of the present artificial set of conditions." He has reached the conclusion that "by freedom and the actions which occur out

of it, the railway will be put in the best position to do the essential portion of rail transportation that the railway and only the railway can perform."

Although agreed charges are entered into largely to hold or regain traffic to the railroads and are, therefore, a reduction under conventional rates, the revenues from agreed charges are high. Testimony brought out that the average ton-mile revenues for the CNR on carload traffic is about 1.32 cents, on the basis of a waybill study for 1953. The sample figure for the Province of Alberta (an opponent of agreed charges) is 1.17 cents.

In contrast, the average revenue received by the railroads on traffic which is subject to truck competition is 2.5 cents per revenue ton-mile, and for traffic moving on agreed charges it is approximately 3.5 cents. At another point in the testimony the witness declared: "I am charged with the special duty of keeping the competitive rates and agreed charge rates under review, and I can say that I know of no case of an agreed charge rate put in to meet highway competition that is not highly profitable to the railway."

## HOW AGREED CHARGES WORK IN BRITAIN

Agreed charges — invented by the British railways — were a form of rate-making highly effective in holding traffic on the rails even before the British railways were freed from their traditional chains. Agreed charges will be an even more important part of their pricing technique in the future, according to David Blee of the British Transport Commission.

The first agreed charge was published in 1931 and was immediately tested in the courts on the grounds that it violated existing laws. While in the Road and Rail Traffic Act of 1933, agreed charges were made "respectable," their making was severely restricted. Each proposed agreed charge had to go before the Transport Tribunal (corresponding roughly to the U.S.'s ICC) for adjudication.

Nevertheless, in even this restricted sphere, between 3,500 and 4,000 agreed charges were placed in effect — each with the approval of the Transport Tribunal.

Since enactment of the 1953 legislation, however, "there have been hundreds of new agreed charges and agreement rates which, being of the nature of private bargains between two business undertakings, . . . are not published. I have not the number, but it would be large."

### Freedom to Act

Today, according to Mr. Blee, Britain's railways are "free to make any agreed charge they like as a private matter between the parties, which is not required to be published nor to be presented to any court for adjudication."

Under the new Transport Act, British Railways have "entered into a whole series of new agreed charges which, in all respects, have been treated as private business undertakings be-

tween the railway on the one hand and the party with whom the agreement is made on the other."

Mr. Blee made it clear that it is possible to make an agreed charge with one shipper and a different agreement with another covering the same commodities.

Regarding the secrecy which surrounds such agreements, Mr. Blee asserted: "After all, . . . if it were possible . . . to require every road hauler to make a faithful record of all the rates he was charging to every trader, I am perfectly sure you would find that there was a different rate to different traders in the same town for the same commodity — hundreds and hundreds of times over."

"It is a market bargain which is struck by the hauler who is after business. The railways, of course, who have to live in that atmosphere must be equally free to strike a market bargain."

### Three Types of Contracts

According to Mr. Blee, there are three types of contracts for agreed charges:

(1) A flat rate or agreed charge expressed as a weighted average rate to serve a given area for an individual shipper. This was the form of contract made prior to the Transport Act of 1953. It is being continued.

(2) A private agreement between the railway and the shipper incorporating a single rate, wherein the shipper undertakes "important contractual obligations."

(3) A private agreement wherein both the railway and the shipper "bind themselves . . . to do various things in the interest of one or the other; it may be a specified percentage of the trader's business, or a total volume of tonnage to be moved by the rail-

way over a period of time or under such equipment."

While, in general, British agreed charges cover only one commodity, there is no legal or practical reason why they should not embrace all of the commodities moved by a firm. "In fact," recalls Mr. Blee, "there is a classic example where it does embrace all commodities sold by the firm." This is the agreement with Woolworth & Co. which covers everything Woolworth sells in all their shops through the whole country. The rate paid is a simple percentage of the purchase price paid by Woolworth for the articles they buy.

Mr. Blee explained that under contract type No. 1 the shipper will undertake to give to the railway either a stated tonnage over a period of time or to make each offering of a minimum quantity — stated in carloads or by some other measurement.

In contrast, in form No. 2, the agreements entered into "are usually those which relate to the shipper's product over a given area of the country."

So far as the rate applies to an area, the shipper is required by the agreement to give the railroad the whole of his traffic.

However, in entering into the agreement, the shipper may desire to specifically exclude an area or he may say "I want to use my own vehicles within a radius of 20-40 miles." This kind of reservation or exception is specifically provided for in the agreement.

### How Agreed Charges Are Made

Mr. Blee explained that most agreed charges are of the nature of a weighted average rate. To arrive at this rate there is made an investigation of the distribution of the commodity in tons per mile over the area to be covered by the agreement. This weighted average is the initial foundation of the rate negotiation. It follows that the weighted average rate to cover the dis-

tribution of merchandise over a fairly wide area, for short distances, probably exceeds the appropriate standard rate for this traffic. The railway is bound to see to it that the shipper does not escape this higher rate by resorting to private transportation. For this reason, many agreed charges are based upon guarantees that the shipper will give the railways an agreed proportion of his traffic.

#### General Increases

In entering into agreed charges, British railways have consistently made it one of the conditions of the contract that the rate is subject at once to any percentage increase which may be ordered as applicable to rates in general. "In short, the agreed charge does not contract the party out of a percentage increase which may become generally operative but it applies concurrently and with equal force to him."

As far as Mr. Blee can remember, there is no agreed charge which relates to a group of firms in a common industry—each agreement is with an individual shipper. However, there is no legal impediment to the railroads entering into an agreement with a trade association or some other national or regional party of shippers.

The Canadian commission expressed considerable interest in the means by which the railways police compliance with agreements. Mr. Blee stated that he knew of no agreed charge that has been cancelled as violating the contract. He pointed out that railways believe the shipper has cause for complaint if the railways' service is below par.

In any event, said Mr. Blee, railways are "the servants of industry and we seek to help them develop their business. Naturally we have a degree of self-interest, because the more the business of the country develops the more traffic there is to carry. It is a mutual advantage."

Asked whether the British railways, in negotiating agreed charges, seek to protect businesses competing with the shipper who is a party to the agreement, Mr. Blee replied: "The negotiations we have with traders are individual to themselves." Every trader acts for himself. Mr. Blee went on to point out that more than 85% of the business on the British railways is moved under legal exception rates which are available to all.

The British railways recognize no duty to maintain relationships among the rates paid by competing shippers.

The British traffic officer characterized transport competition today as "a situation of frank and open business competition, exactly the same as any other industry when they are seeking to get an order. Either they get the order or the other man gets the order. We are quite frankly out to take the order."

"We satisfy ourselves that we take no business on which we cannot make a profit. Having said that, we are out for every bit of business that we can get."



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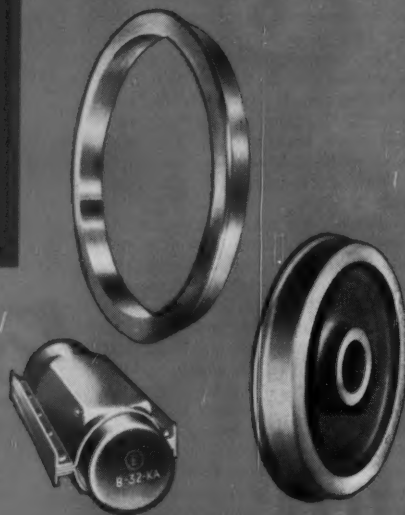
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## Supply Trade

(Continued from page 16)

as a supervising engineer, and was elected president in 1943.

**Thomas W. Johnson** has been appointed director of engineering for the five divisions of the **New York Air Brake Company**. He was previously assistant to the executive engineering consultant, **John G. Wood**, who will continue in that capacity.

## OBITUARY

**Donald F. Grace**, 52, vice-president and secretary of Chicago Steel Service Company, died at his home in Chicago, January 2.

## Securities

**Chicago, Rock Island & Pacific.**—To Exchange Debentures for Preferred Stock.—Redemption of Rock Island preferred stock is expected to result from proposed issuance and sale of not more than \$65 million of 40-year income debentures authorized, subject to ICC approval, by the board of directors.

## Application

**BALTIMORE & OHIO.**—To issue \$10,251,000 of first mortgage, 4% bonds, series C, due October 1, 1974; \$4,714,000 of Southwestern division, first mortgage 4% bonds, series B, due January 1, 1975; \$4,649,000 of Pittsburgh & Lake Erie and West Virginia system refunding mortgage 4% bonds, series C, due November 1, 1974; and \$2,627,000 of Toledo-Cincinnati division, first lien and refunding mortgage 4% bonds, series G, due January 1, 1975. The B&O would pledge and repledge these bonds as collateral security for short term notes to be negotiated, proceeds of which would be used to acquire the road's now outstanding bonds. Benefit to the road, the application states, would be in reduction in interest—from the average of 4.595% on the bonds to be acquired to the 3¼% expected on the short term bank notes.

**CENTRAL OF GEORGIA.**—To issue 35,000 shares of previously authorized common stock under a restricted stock option plan to allow key personnel to have a proprietary interest in the road. Proceeds the road stated in its application, would be used for corporate purposes, but the primary effect would be to afford selected employees the opportunity to obtain or increase holdings of company stock. The stock price would be determined by the market price of the road's common stock current at the time the option is granted.

## Authorizations

**ATLANTIC COAST LINE.**—To procure authentication and delivery of \$13,474,000 of general mortgage 3½% bonds, series X, due August 1, 2002, to be held in the road's treasury as partial reimbursement for capital expenditures made in the period April 1, 1952, to December 31, 1953. Division 4 reported that it is not proposed to sell or otherwise dispose of these bonds, and stipulated that authority must be obtained from the ICC when and if it is desired to sell or dispose of them.

**COUDERSPORT & PORT ALLEGANY.**—To extend from January 15, 1955, to January 15, 1965, the date of maturity of \$32,000 of its first mortgage 5% refunding bonds because

of the inability of the road to retire the bonds as scheduled.

**ILLINOIS CENTRAL.**—To assume liability for \$8,700,000 of equipment trust certificates to finance in part purchase of 70 diesel-electric road-switching locomotives at an estimated total cost of \$11,707,800 (*Railway Age*, December 20, page 39). Division 4 approved sale of the certificates at 2½% interest for 99.15—the bid of Halsey, Stuart & Co. and four associates—which will make the annual cost of the proceeds to the road approximately 2.76%. The certificates were reoffered to the public at prices yielding from 1.3 to 2.85%, according to maturity.

**NORTHERN PACIFIC.**—To assume liability for \$3,960,000 of equipment trust certificates to finance in part purchase of 30 diesel-electric locomotives costing an estimated \$4,952,020 (*Railway Age*, December 27, page 16). Division 4 approved sale of the certificates at 2¼% interest for 99.19—the bid of Salomon Bros. & Hutzler and three associates—which will make the annual cost of the proceeds to the road approximately 2.89%. The certificates were reoffered to the public at prices yielding from 1.6 to 2.95%, according to maturity.

**RAILWAY EXPRESS AGENCY.**—To issue \$6,250,000 of promissory notes as part of an arrangement to finance purchase of 300 refrigerator cars estimated to cost approximately \$6,150,000 (*Railway Age*, December 20, page 42).

## Dividends Declared

**CHICAGO, INDIANAPOLIS & LOUISVILLE.**—class A common stock trust certificates, \$1.25 accumulative, payable February 7 to holders of record January 24.

**NEW YORK, CHICAGO & ST. LOUIS.**—common, 7½%, quarterly; 6% preferred A, \$1.50 quarterly; both payable April 1 to holders of record February 25.

**NORTHERN (New Hampshire).**—\$1.50, quarterly, payable January 31 to holders of record January 13.

**WESTERN PACIFIC.**—75¢ common, payable February 15 to holders of record February 1.

## Security Price Averages

	Jan. 18	Prev. Week	Last Year
Average price of 20 representative railway stocks	82.45	85.91	60.32
Average price of 20 representative railway bonds	97.86	97.88	92.59

## Railway Officers

**ARKANSAS & LOUISIANA MISSOURI.**—Travis Davis has been appointed assistant general freight agent, rates and divisions, at Shreveport, La.

**CANADIAN NATIONAL.**—R. G. Chestnut, assistant to vice-president of research and development, has been appointed special assistant in the operation department at Montreal and will be engaged on matters relating to organization and staff.

**L. S. McGregor**, superintendent motive power and car equipment, Northern Ontario district, has been appointed general superintendent motive power and car equipment, Central region, at Toronto, succeeding **W. C. Bowra**, who has been named special assistant, operation department, Central region, at Toronto.

**Ralph T. Vaughan** has been appointed special assistant, office of president, at Montreal. He was formerly executive assistant to the premier of Nova Scotia.

**G. T. Trowhill**, general superintendent of CN Telegraphs at Toronto, has retired after 42 years of service.

**E. P. Stephenson**, signal engineer, Central region, has been promoted to system signal engineer at Montreal, succeeding **H. L. Black**, retired, **D. H. Green**, assistant signal engineer at Montreal, has been promoted to signal engineer, Central region, at Toronto, succeeding Mr. Stephenson.

A native of Hazel Hill, N.S., Mr.



E. P. Stephenson

Stephenson attended Nova Scotia Technical College and Dalhousie University, graduating with a Bachelor of Engineering (electrical) degree. He joined the CNR as assistant signal engineer at Toronto in 1947, and two years later was promoted to signal engineer there.

Mr. Green, a native of Montreal, joined the CNR as circuit designer at Moncton in 1948, later serving as assistant signal engineer there and assistant to signal engineer at Toronto. He returned to Montreal as assistant signal engineer in September 1953.

**CLAREMONT & CONCORD.**—This newly organized company (*Railway Age*, December 27, 1954, page 15) has announced election of the following officers: **S. M. Pinsky**, president, Boston, Mass.; **John A. Long**, vice-president and general manager, Claremont, N.H.; **H. E. Levine**, treasurer, Boston; **Jessie S. Pinsky**, secretary, Boston; **Ira I. Streiff**, auditor, New York; and, all at Claremont, **A. D. Leahy**, counsel, **Harley E. Bump**, general freight agent, and **Walter V. Connors**, assistant to vice-president.

**ERIE.**—Frank W. Davison, commercial agent at Detroit, has been promoted to general agent at Peoria, Ill., succeeding **K. O. Hemming**, transferred to Los Angeles.

**ILLINOIS TERMINAL.**—James P. Donahue has been appointed general freight and passenger agent at St. Louis and will continue to be responsible for system supervision of passenger traffic matters in addition to his other duties. The position of passenger traffic manager, formerly

held by Mr. Donahue, has been abolished.

**MAINE CENTRAL.**—**Morton A. Thomas**, assistant general manager—operating, has been appointed general manager—transportation, and **Roy E. Baker**, assistant general manager of the Boston and Maine and Maine Central, has been appointed general manager—mechanical, of the latter road, both effective February 1.

Mr. Thomas started railroading in 1910 as telegraph operator on the B&M, being promoted through various



Morton A. Thomas

positions to trainmaster. In 1938 he became superintendent of the Montpelier & Wells River and the St. Johnsbury & Lake Champlain; in 1942, superintendent of the Eastern division of the MC; and in 1943, vice-president and general manager of the two short lines. Later in the same year he returned to the MC as superintendent of the Portland division and in 1947 was made assistant general manager—operating.

Mr. Baker started with the B&M in 1925 as air brake instructor and supervisor of automatic train control. He



Roy E. Baker

held various positions in the mechanical department until 1944, when he was made assistant superintendent of the Fitchburg division. He joined the

MC in 1945, as superintendent car maintenance for it and the B&M, and in 1948 was made assistant general manager of both.

**NEW YORK CENTRAL.**—**Harry A. Fathauer**, assistant general claims attorney at New York, retired December 31, 1954, after 50 years' service. **M. N. Ray**, assistant to general claims attorney, succeeds Mr. Fathauer and has been replaced by **C. P. Rath**, chief claim agent at Chicago. **A. W. Krug** has been named chief claim agent at Detroit, succeeding **P. H. Winter**, who has been transferred to Chicago to replace Mr. Rath.

**J. J. Corcoran**, chief signal engineer at Cleveland, also retired December 31, after 48 years' service.

**John E. Salter** has been appointed assistant director, news bureau, at New York.

**Arthur T. Van Wart** has been named assistant general manager—labor relations at Detroit. Mr. Van Wart was formerly general chairman for the Brotherhood of Railroad Trainmen on the Boston & Albany.

**PITTSBURG & SHAWMUT.**—**L. R. Button**, traffic manager, has been elected vice-president—traffic and **Walter E. Buhite**, acting general manager, has been elected general manager, both at Kittanning, Pa.

Mr. Button entered P&S service in 1904 as clerk in the traffic department. He was appointed chief of tariff bureau in 1916; general freight and passenger agent in 1935, and traffic manager in 1940.

Mr. Buhite joined the P&S as clerk in the mechanical department in December 1935 and, after working in numerous departments, was appointed trainmaster in 1943. He was promoted to superintendent in 1945, general superintendent in 1950, and acting general manager in 1953. Mr. Buhite completed the Advanced Management Course at Harvard Graduate School of Business Administration in December 1954.

**PULLMAN COMPANY.**—**Louis C. Rosenthal**, assistant auditor of receipts, has retired after 51 years of service.

**RICHMOND, FREDERICKSBURG & POTOMAC.**—**Stuart Shumate**, superintendent of Potomac yard, has been elected general superintendent.

**Stuart C. Leake**, general agent—solicitation, has retired after 51 years of service.

**Louie C. Casey**, commercial agent, has been appointed general agent, with headquarters as before at Atlanta, Ga. **C. B. Hamersly**, general agent at Atlanta, has been appointed division freight agent—Southern territory, and **J. R. Holladay, Jr.**, commercial agent, has been named division freight agent—Northern territory, both at Richmond, Va.

**SOUTHERN PACIFIC.**—**Frank**

**E. Russell**, superintendent of motive power at Sacramento, Cal., has been appointed superintendent of motive power and equipment for the SP's Texas & Louisiana lines at Houston, Tex. **Frank E. Molloy**, assistant superintendent of motive power at Sacramento, succeeds Mr. Russell. **William O. Brown**, master mechanic of the Portland division, succeeds Mr. Molloy.

**WABASH.**—**R. F. Waller**, division passenger agent at Kansas City, Mo., has retired after 45 years of service. Mr. Waller's successor is **Glenn F. Welker**, who transfers from Decatur, Ill., and in turn has been replaced by **Don J. Peterson**, city passenger agent at Kansas City. **Lloyd E. Caldwell** succeeds Mr. Peterson.

**WESTERN PACIFIC.**—**Philip L. Wyche**, executive assistant at San Francisco, has been appointed assistant to vice-president.

**E. P. Peterson**, assistant chief engineer at San Francisco, and **W. T. Richards**, engineer maintenance of way and structures there, have retired.



Philip L. Wyche

**Arthur W. Carlson**, bridge engineer, has been named engineer of bridges and structures. **A. D. Quackenbush**, office engineer, has been promoted to principal assistant engineer, and has been succeeded by **John C. Miller**, assistant office engineer.

## OBITUARY

**George Allyne Belden**, 66, assistant chief engineer of the **Central of Georgia** at Savannah, Ga., died in that city January 9.

**Guy E. Martin, Sr.**, 56, superintendent of water service of the **Illinois Central**, died January 13 in Illinois Central Hospital, Chicago.

**Edwin F. Bilo**, who retired April 30, 1954, as manager of the Passenger Car Section, Car Service Division, **Association of American Railroads**, died in Washington, D. C., on January 18. He was in his 71st year.

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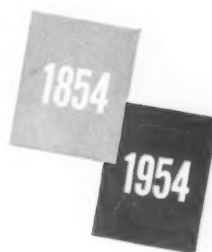
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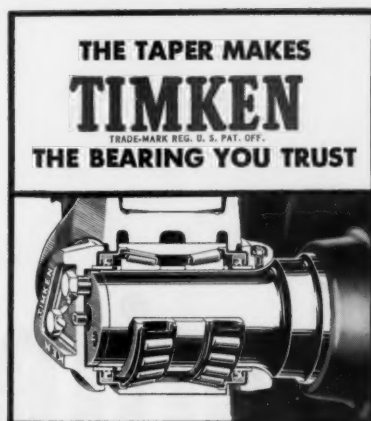
1) *No lateral movement within the bearing.* In straight roller bearings auxiliary thrust devices are needed to take thrust loads. These thrust devices are not completely effective and are difficult to lubricate with grease. And lateral movement causes scuffing of rollers and races. It also pumps lubricant through the seal and out of the journal box, draws dirt and water in.

In Timken bearings the taper prevents lateral movement, enables them to take

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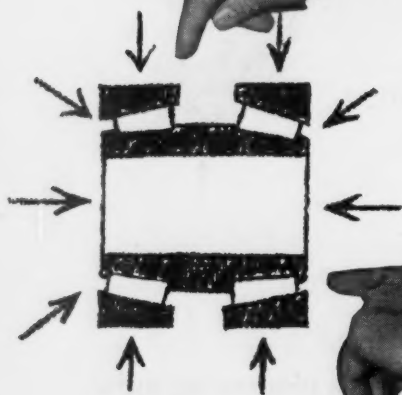
2) *Positive roller alignment.* The taper holds ends of rollers snug against the rib, where wide area contact keeps them properly aligned. Rollers can't skew to upset the full line contact and shorten the life of the bearing.

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